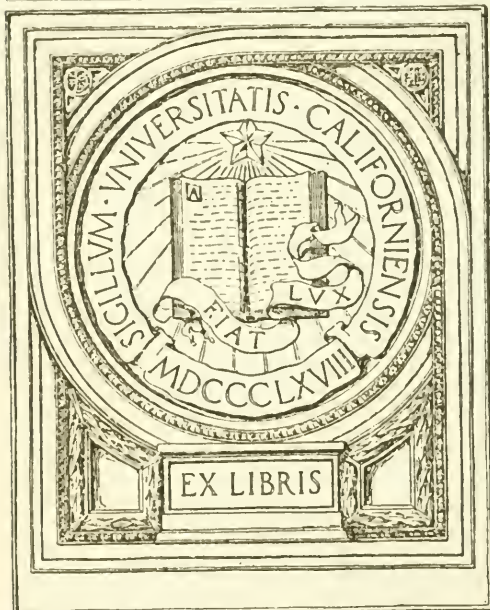


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SUGGESTION
IN
EDUCATION

BY

M. W. KEATINGE, M.A.

READER IN EDUCATION IN THE UNIVERSITY OF OXFORD

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SECOND EDITION

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PREFACE TO THE SECOND EDITION

I CAN scarcely allow this book to go into a second edition without making some allusion to the criticism of its doctrines which has been reiterated by Dr. F. H. Hayward on every second page of his recently published volumes, *Education and the Heredity Spectre* (1908) and *Day and Evening Schools* (1910). It is difficult to be angry with Dr. Hayward even with the greatest wish to indulge one's passions. Indeed, when he refers to the state of English opinion upon education in the following words, "There is not even a single healthy and honest controversy being fought out at the present day. In any country that was educationally awake, Mr. Keatinge's important and arrestive doctrine of 'contrariance' would, during the past two years, have awakened animated discussion,"¹ it is impossible for me not to feel that he is a sympathetic critic, and that a reply to his criticism almost smacks of discourtesy. His remarks, however, embody such a misapprehension of the proper use of terms, that in the interest of educational theory I cannot let them pass unchallenged.

Dr. Hayward brings two charges against me :

- (1) I am a Herbartian without admitting it, and yet cross swords with the professed followers of Herbart.

¹ *Day and Evening Schools*, p. 577.

(2) I talk of contrariant ideas without making it clear what their origin is. "I admit," he says, "that a youth may derive wrong ideas from companions or from books; but this is not what Mr. Keatinge means. He does not trace contrariant ideas to any definite source, but imagines that they spring up inevitably in the soul. This I doubt, this I am very strongly inclined even to deny."¹

(1) Nothing is more futile than a dispute which never would have arisen if the combatants had been at pains to define their terms at the outset, and Dr. Hayward's attitude towards me results, I believe, from the lack of such definition, or at least of a correct definition.

What is Herbartianism, and who is a Herbartian? Dr. Hayward defines the term for us.

"What, essentially, is Herbartianism? It is a system of thought which regards the 'idea' or 'presentation' as the best starting-point for educational exposition; which believes that much mental life can be interpreted in terms of ideas—their emergence, coalescence, rivalry, and so forth; that factors like feeling and will, soul and heredity, though as primitive and fundamental as any others, are best dealt with educationally in relation to ideas or presentations; that certain categories—notably 'apperception' and 'interest,' or these in union, 'apperceptive interest'—are more helpful than the categories of the faculty psychology; that education must have a definite and ideal aim; that this aim is 'character'; that character is linked with insight and interest; that insight and interest are linked with apperception; that these things are under educational control, and so forth."²

And again:

"Herbartians do not for a moment believe that ideas are self-existent entities, or that feeling and will are not implicit

¹ *Op. cit.* p. 489.

² *Education and the Heredity Spectre*, p. 142.

at first in the soul, or that heredity and instinct are impotent. They do but believe that the best starting-point for the educational thinker is the idea; the most illuminating psychological formula, 'apperception'; the best aim to be set before the teacher, 'many-sided interest'; the best ultimate aim, 'character-forming.'"¹

With this attitude towards mental process, in spite of the excessive and needless array of technical terms in which it is expressed, little fault can be found, but there is no element in it that can properly be described as Herbartian. We have here a sketch of a very common, indeed of the only possible attitude in educational psychology, the attitude which recognizes that mental processes must be considered from two standpoints: (1) from that which looks on mental content, and to some extent on mental existence, as built up by experience, the result of this experience in the mind being meanings or ideas which are associated and linked together, in other words, 'which believes that much mental life can be interpreted in terms of ideas'; (2) from that which regards mind as a unified entity, conscious of itself as struggling and striving in a certain direction, in other words, 'which believes that factors like feeling and will are primitive and fundamental.' The first standpoint is necessary in dealing with all phases of education that involve the imparting or acquisition of knowledge, the second must in part be adopted when 'will' and 'character' are in question. Modern writers on psychology adopt both these standpoints, though they do not always seem clearly to realize this, and pass from one to the other as it suits their purpose to do so. Further, when working from

¹ *Op. cit.*, Preface, p. x.

the associationist standpoint they frequently use terms which were introduced into the language of associationism by Herbart. Generally these terms are not used in their strict Herbartian sense, but it must be recognized that Herbartian terminology has exercised a powerful influence on the modes of expression adopted by prominent psychologists such as Dr. G. F. Stout in England and Dr. Th. Lipps in Germany. These writers are, however, no more Herbartians than the persons who in speaking use the 'quotations' to be found in Shakespeare are to be called Shakespeareans. For the Herbartian doctrine of the mind and its constitution is something definite which is not shared by modern writers on psychology.

For Herbart the mind is primarily intellectual, that is to say, it consists of presentations, or, to adopt the usual English terminology, ideas. Herbart recognized, it is true, that the mind is not purely intellectual, that we are conscious of feelings, and that, when in a certain mental state, we talk of ourselves as 'willing'; but for him feeling and will are derivative. Feeling arises out of the interplay and mutual inhibition and furtherance of ideas, while will similarly arises out of the interplay of feelings. The Herbartian position is *not* that feeling and will are influenced by ideas, but that feeling and will arise out of presentations or ideas, which is a vastly different matter.

The result of a rigorous application of the true Herbartian doctrine to problems of education is easily seen. Character-forming in some sense or other is admitted to be an important aim in education; in one aspect character is identical with will, will arises out of the interplay of ideas, and therefore character is the

result of ideas properly presented to the mind, in other words, of a good instruction. It is but a step from this position to lay excessive stress on the value of direct moral instruction and to believe that the best way to make a child moral is to talk to him about morality. In addition, the thorough-paced Herbartian must deny and ridicule the notion that any kind of formal training can be given to the mind or to the feelings; for instance, he must find it absurd to imagine that self-control grows easier in proportion to its exercise.

The psychological position outlined above is that which Dr. Hayward must adopt if he is with any sense to call himself a Herbartian, and these are the educational corollaries of that position. Now it happens that these corollaries are in fact the educational views which he advocates, and it is therefore legitimate to suppose that Dr. Hayward is in error when he maintains that the attitude described in his own words on page vi, which he calls Herbartianism, is in reality the basis of his educational position. Indeed, a number of expressions in his books show that as soon as he begins to apply his psychology he is applying not the modern position which he chooses to term Herbartianism, but Herbart's psychology in its purity. Two instances must suffice. "The 'will' is not a separate faculty, but is rooted in the circle of thought."¹ "The case (for moral instruction) . . . seems stronger yet when we look at moral ideas in the Herbartian way—not as mere knowledge acting distantly upon the desires, the motives and the will, but as the roots of these."² Neither of these statements is in accordance with what Dr. Hayward calls 'Herbartianism'; but they are both undiluted *Herbart*.

¹ *Education and the Heredity Spectre*, p. 98.

² *Ibid.* p. 103.

I have, I trust, made it clear that this controversy is merely a question of terms. Dr. Hayward has of course a right to call any position that he pleases Herbartianism, as long as he makes it evident that by this term he does not mean an application of Herbart's psychology to education. The term would still be a mischievous and a misleading one, but if it were used consistently it might be allowed. Dr. Hayward, as I have shown above, is not consistent, for when he deals with moral instruction he forgets all about his definition of 'Herbartianism,' and becomes a true Herbartian.

(2) Dr. Hayward's other charge is easily disposed of. He complains that I have not explained "where contrariant ideas come from." In so far as they do not enter the mind from without, they arise out of the instinct of combativeness, and the term 'contrariant idea' may be looked upon as the associationist mode of expressing the working of this instinct in the boy's mental system. During the period of adolescence the instinct of combativeness is especially strong, and it is at this stage that contrariant ideas are most to be encountered and render moral education most difficult.

OXFORD,
February 1911.

NOTE TO FIRST EDITION

MY best thanks are due to my colleague Miss A. J. Cooper, to Mr. J. L. Paton, High Master of the Manchester Grammar School, and to Mr. W. McDougall, Wilde Reader in Mental Philosophy in the University of Oxford, who in the midst of their numerous occupations found time to read my manuscript and to give me much valuable advice.

OXFORD,
August 1907.

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SUGGESTION IN EDUCATION

CHAPTER I

25277 HYPNOTIC SUGGESTION

A SUGGESTIVE teacher, a suggestive book, a suggestive picture, a suggestive situation—these are the terms in which we speak of the people, the books, the pictures, and the situations that have made a deep impression on us, that have set going a train of thought which refuses to be quieted until it has worked itself out to a satisfactory conclusion, and which gives us no rest until we have altered our aims, our circumstances, and even our characters, so that the idea suggested may the more easily become realised. These are the teachers and the books that count. Other teachers are hired like waiters and perform their duties like hirelings; other books are bought and sold like pounds of tea and serve to foster the modern habit of idly looking at print. But the real teacher and the real book! We come across them but seldom, we treasure them, if we have any insight, while occasion permits, and we part from them reluctantly, not knowing when we may find them again. For the same person and even the same book may not always be suggestive. The subtle quality is

there on one occasion ; we seek it on another and it is gone. The quintessence has evaporated ; the contribution that we ourselves made towards the blend is not forthcoming ; whatever the reason may be, the magic is no longer to be found. The book seems duller, the teacher seems more commonplace. As we look back upon our teachers and our books we recognise with gratitude a few that lived. But how few they are, and how many are the others !

Can any instrument be discovered that will give us control over these situations ? Is there any process of analysis or of observation that will disclose to us the conditions of suggestion, the method of presenting ideas in such a way that they live in the minds of our hearers ? Is there no apprenticeship that insures a mastery over the master-art ? Or is the very word "method" an absurdity in such a connexion ? Are the processes that we are considering so personal, so dependent on rare combinations of individuality and circumstance, so elusive and so volatile, that the attempt to objectify them and to publish their secrets is like the endeavour to catch on canvas the opaline tint of the Atlantic breaker as it rears and falls ; like the impudent effort to reproduce a violin performance by Kreisler on the gramophone or a passionate nocturne of Chopin on the pianola ?

The present essay, while it does not pretend to give a complete answer to these questions, has as its aim the investigation of the meaning that underlies the term "suggestion," the analysis of its conditions, and the consideration of its importance for education.

The nature of suggestion, as of all mental processes,

is most easily discovered by the examination of extreme cases. It is in the pathology of mind that we see written large the traits that clude us in the normal state. Our starting-point will therefore be a brief description of hypnotic suggestion.

The general characteristic of suggestion in the hypnotic state is that an idea when introduced into the mind tends to realise itself immediately in movement, sensation, emotion, or belief. The simplest form of suggestion is perhaps exemplified by the imitation of movements. The hypnotised subject will remain motionless with open eyes. When questioned he says that he is thinking of nothing, and makes no movement spontaneously. In this condition he imitates automatically every movement that is made before him.¹ A variety of this phenomenon is speech-imitation, sometimes called *écholalie*, when the subject ceases to reply to questions that are put to him and simply repeats them.²

¹ "I place myself in front of him and move my head gently from side to side. After a few seconds' hesitation he performs the same movement. I raise my arms, he raises his arms; I move as if I were nursing a baby, he makes the same movements. I scratch my nose, I place my hands behind my back, I walk, I pull my handkerchief from my pocket, I blow my nose, I sneeze. The patient imitates all my movements servilely and copies all my attitudes" (Pitres, *Leçons cliniques sur l'Hystérie et l'Hypnotisme*, 1891).

² This phenomenon is produced, says Berger of Breslau, "by placing one hand on the head of the somnambulistic patient, selecting either the forehead or the back of the neck. Immediately the subject, who has hitherto replied at once to questions that were asked, ceases to reply, but repeats the questions. He is, as it were, converted into a phonograph. He can be made sing, cry, cough, and sneeze. He will repeat words spoken in foreign languages, and will do this with a fidelity which is often surprising" (Grasset, *Hypnotisme et Suggestion*, 1903, p. 183).

According to Moll, this imitation is conscious and not unconscious. "The notion that only certain tracts of the bodily surface must be stimulated in order to produce this repetition may be considered a mistake on the part of the Breslau investigators. I believe that the hypnotic echoes what he believes he is intended to echo. It is certain that some persons are able to perform great feats in this way, imitating a hitherto unknown language quickly and correctly, particularly after the necessary practice" (Moll, *Hypnotism*, p. 99).

Similarly negative suggestions of movement can be made. The experimenter says to the subject, "You cannot advance." He immediately stands still and makes fruitless efforts to move. He rests glued to the spot. If the experimenter continues, "Your legs cannot carry you," he falls as if paralysed. If he says, "Your right leg is paralysed," he drags along his right leg as though it were powerless. Even the involuntary muscular system can be affected by suggestion. The effect of a dose of castor oil can be prevented or postponed, and pure water can be made to act as an emetic. Organic changes also, such as blisters, can be produced.¹

No less remarkable are the manifestations of suggestion in the domains of sensation and perception. The subject can be made to see an object as red or blue according to the will of the experimenter. A good example of a visual illusion is the well-known one of the portrait. It is suggested to the subject that there is a portrait on one of a number of blank cards. Not only will he see the portrait, but he will always see it on the same side of the card and pointing in the same direction. In the same way the sense of taste can be affected. "I make my subject drink water or vinegar instead of wine. I make him breathe ammonia instead of eau de Cologne. A pencil in his mouth does instead of a cigar, of which he sucks up the aroma

¹ Forel, at Zurich, made experiments on a nurse twenty-three years of age and not at all hysterical. "A gummed label was fixed on her chest above each breast; the paper was square. In no case was an irritating gum used. At midday Forel suggested that a blister had been put on the left side; and at six o'clock in the evening a moist spot had appeared in this place; the skin was swollen and reddened around it, and a little inflammation had appeared also on the right side, but much less. Forel then did away with the suggestion. On the next day there was a scab on the left side" (Moll, *op. cit.* p. 135).

with delight, blowing into the air clouds of imaginary smoke." ¹

It would be easy to multiply instances of sense illusions, but as the object in view is merely to set forth the general characteristics of hypnotic suggestion, a few examples must serve as types. Of special interest are suggestions of sense anæsthesia, or, as they are sometimes called, negative sense suggestions. Here anæsthesia, generally connected with a certain degree of motor paralysis, can be suggested for any portion of the body, and a negative suggestion, often of a very partial kind, can be made for any sense organ. In this condition the subject is unable to see an object or a portion of an object that is placed before his eyes, or to hear a person who is talking to him. A development of the suggestion of sense illusion is the introduction of an idea which of itself produces a system of ideas embodying a complete situation. In this case it is merely necessary to start the subject off. His imagination will then supply the rest.² A striking instance of this is afforded when the subject is told that he is taking part in some scene of his previous experience. A volunteer, for example, when told that he is at the drill hall, will act an imaginary

¹ Bernheim, *Suggestion*, 3rd ed. 1891, p. 44.

² Richet said to a subject, "'Come with me, we shall go out and travel.' Then the patient described in order the places that they passed—the corridors of the hospital and the roads which she traversed to reach the station. As she was familiar with all these places, she described with accuracy the spots that her imagination and her memory, both equally excited, presented to her in the guise of reality. Then suddenly it was possible to transport her to a distant spot that she did not know—to Como, for example, or to the Arctic regions. Her imagination, left to itself, gave itself up to ideas that did not lack charm, and that were interesting from their apparent precision. We were always surprised by the vivacity with which she took in these imaginary perceptions" (Richet, *L'Homme et l'Intelligence*, p. 178).

scene and talk of the officers and friends whom he sees present.¹

Most striking of all are the cases in which it is suggested to the subject that he is another personality, a peasant, a general, or an archbishop. He will readily

¹ The subject sits up in his chair and the following conversation is carried on :—

E. A. What do you see?

K. Chaps waiting to drill. (He laughs suddenly.)

E. A. What is amusing you?

K. Two chaps wrestling there. (I find that he is analgesic and anæsthetic; evidently he is in a state of passive somnambulism.)

E. A. Did you feel anybody touch you?

K. No. There's no one near me. (He continues laughing and talking. He says, "You can't wrestle in jiu-jitsu style—you don't know what to do, do you? No, I won't have to go to-night.")

E. A. Who are you talking to?

K. Talking to this chap 'ere, Brown. He thinks he can wrestle. (Laughs. Suddenly stands up and moves as if taking off his hat.)

E. A. What are you doing?

K. That's an officer; didn't you see him?

E. A. No, I wasn't looking.

K. Well, you ought to have been. You'll get into trouble if you don't take off your hat when you see an officer. (He goes on talking to imaginary people who are apparently trying to persuade him to wrestle. . . . He is at last persuaded.)

E. A. Now then, stand up.

K. Well, we won't hurt one another; just a friendly. (Wrestles with an imaginary opponent.)

E. A. Now you've got him. Hit him hard; hurt him.

K. No, I don't want to hurt him.

E. A. Do you see that chap over there? He's making faces at you. Go and punch his head.

K. (Refuses this idea, laughs a good deal; he is a good-natured chap, and refuses all suggestions that he should hurt the other man in any way. Says I'm Steve Barton.)

E. A. Come and have a drink.

K. No; I don't feel like drinking to-night, Steve; besides, you know I never drink.

E. A. Never mind. Here's a glass of whisky and water. (I put an empty glass into his hand.)

K. (Smells it.) It's whisky; makes me sick the smell of it; give it to the sergeant, he'll drink it. What—won't he? (And so on; no persuasion will make him drink it. I offer him five pounds to drink it.)

K. Well, of course, anybody will do it for a fiver. Some fellows would for a shilling. (After being given an imaginary fiver and some argument, he drinks it, and then mocks at whisky as an unpleasant drink.) (E. Ash, M.B., *Hypnotism and Suggestion*, 1906, p. 73.)

take up the suggestion, and will speak and act the part with great accuracy. His own personality is for the moment completely obscured.¹

We are now in a position to consider some of the respects in which the mind in hypnosis is different from the mind in the waking state. In all these cases an idea is suggested and in each instance it is accepted uncritically. There is a complete inhibition of the natural tendency to ask if the suggested idea is true or reasonable. The results of past experience appear to be present in the mind only so far as they tend to further the development of the suggested idea; so far as they might counteract it they are inoperative. All the contrariant ideas to which the mind owes its power to persist and to hold its own against the impressions made upon it by the environment are for the time being non-existent. If in the waking state I feel an inclination

¹ Richet gives the following example. The subject, the mother of a family, and of a religious turn of mind, is hypnotised, and is told that she is a peasant.

"She rubs her eyes and stretches herself. 'What o'clock is it? Four o'clock.' She walks as if she were dragging along her sabots. 'Well, I must get up. Let's go to the stable. There's the red cow. Turn round. (She pretends to milk a cow.) Leave me alone, Gros-Jean, I tell you. Wait till I've finished my work. You know that I've not finished my work.'

"She is told she is a general. 'Hand me the field-glass. That's right. Where is the captain of the first Zouaves? There are the Kroumirs. I see them coming up the ravine. Commandant, take a company and charge them. They are fine fellows those Zouaves. How well they climb! What do you want, you? What, no orders? (Aside) He is a poor officer, he can do nothing. You on the left, look sharp. (Aside) He's better. . . . Fetch me my horse, my sword . . . Ah, I'm wounded.'

"She is told that she is a priest, and thinks she is the Archbishop of Paris. Her face becomes serious. Her voice grows sweet and honied, and is in great contrast to the rough voice of the last personification. 'Ah, it's you, Monsieur le Grand Vicaire. What do you want? I don't want to be disturbed. . . . Yes, this is the 1st of January, and we must go to the Cathedral. The crowd is very respectful, isn't it, Monsieur le Grand Vicaire? There is much religion in the masses, whatever people may say. Ah, there is a child. Let him come up and I'll bless him.' She gives him her ring (imaginary) to kiss. During the whole scene with her right hand she makes signs of benediction" (Richet, *op. cit.* p. 237).

to imitate a movement that will not in any way aid the train of thought or of action on which I am engaged, my tendency is to inhibit it. If I find that I am beginning to swing my leg because some one else is swinging his leg, I stop the motion under the influence of some such train of thought, which may be only half formulated, as "How stupid of me. I really must not let myself go like this." If I suddenly find that I am beginning to stammer or to yawn because I am in the society of some one who stammers or yawns, I immediately take pains either to inhibit the tendency or to remove myself from the companionship. If I find that I am growing careless about my dress and my personal appearance because I am constantly in the society of slovenly people, I take pains to prevent the habit from growing upon me. It is only when the imitation is confessedly of advantage to the immediate aims of the imitator that it is consciously allowed to persist; in all other cases there is an effort on the part of contrariant ideas to counteract the tendency and check it.

The more striking cases of hypnotic suggestion make it evident that these contrariant ideas are necessary for the very existence of an individual mind. If I am told that a certain colour is red, when my senses tell me that it is blue, I repel the suggestion with vigour. In order to convince me that the suggestion is worthy of credence, it would be necessary to prove to me that I was colour-blind, and that the consensus of the opinion of people otherwise worthy of belief was against me. Even then, though I might think it worth while to consider the suggestion, it is by no means certain that I should adopt it. Still less should I be inclined to listen to the suggestion that a blank card had a portrait on it, or that

the pencil which I was sucking was a cigar, while negative suggestions would only be laughed at.

It is comparatively easy to induce a friend to transport himself back into a previous experience, and in reply to a few questions he will give you an account of a remembered situation; or again, if he had a lively imagination he would, at your request, imagine himself to be a priest or a general, and would act the part; but in neither of these cases, either through your statement or through his own partial acceptance of the situation, would he for a moment be led to think that he was in any place or time but the present, or that his personality had really undergone a change. In hypnosis each of these suggestions is accepted uncritically, and, once accepted, it takes possession of the mind and allows association to go on only within the limits that suit the controlling idea.

It is necessary to lay stress on this inhibition of the contrariant ideas that would otherwise reject the suggestion as being the principal element in the state that we call hypnosis. It will be seen later that the processes of suggestion in hypnosis have their counterpart in the waking state, and it is desirable to isolate the precise element whose absence or whose presence in a greater or a less degree constitutes the essential difference between the abnormal and the normal condition. This is not done by some of the current definitions of suggestion. Moll, for example, describes it as follows: "The different commands which are given to the subject in the experiments described, the prompting and persuasion, are called suggestion."¹ Here the expressions used are singularly unhappy. It is quite true that the suggestions

¹ Moll, *op. cit.* p. 36.

given in many cases take the form of commands, but the essential difference between a command given in the waking state and a suggestion given in hypnosis is that the first may or may not be obeyed, while the second is automatically acted upon. "Persuasion" again is an unfortunate term. It may occasionally be necessary to use persuasion with a hypnotised subject, but this is not the essential element in the process of suggestion. Moll improves upon this description later on. "We may then consider hypnosis as a state in which the normal course of the ideas is inhibited. It matters not whether the ideas have to do with movements or with sense impressions. We have seen that their normal course is always inhibited. In particular, the subject is unable to control the external ideas or to put forward his own; the external ones dominate his consciousness."¹ Undoubtedly the normal course is inhibited, but in a peculiar way, and the word "inhibition" alone does not differentiate the inhibition peculiar to hypnosis from the inhibition that takes place when I am unable to attend to a train of thought on account of toothache, or from that which is found when my attention to an interesting novel distracts my mind from my Christmas bills. In one direction the normal course of ideas in hypnosis is not inhibited at all. Within the closed system which is excited by the initial suggestion association goes on in a manner which is wholly normal in kind and abnormal only in degree. When it is suggested to a subject that he is the Chancellor of the Exchequer, the train of association through which he marshals figures and imposes or lightens taxation is a perfectly normal one; the peculiar element is the inhibition of all the trains of association

¹ Moll, *op. cit.* p. 279.

that would lead him to repel the suggestion and would bring up into his mind the conviction that the statement is an absurd one. The normal course of the ideas is inhibited, but in a very limited manner.

Similarly the definition given by Dr. O. Stoll does not bring out the essential nature of the phenomenon. "The expression 'suggestion' in the beginning betokens nothing more than an idea which is called up in us in various manners by the organic and inorganic world without us, and which forms for us the initial point of further processes of thought, although we may not be fully conscious of the original connexion. Our daily life affords countless examples of such suggestive influences."¹

This definition of suggestion differentiates it in no way from redintegration and the action of the subconscious, which are the common bases of mental life. By "suggestion" Wundt understands "association accompanied by a narrowing of consciousness upon the ideas brought up by association, so that antagonistic psychic combinations do not come into play." This definition gives the general conditions more accurately than the preceding one, but fails to bring out that the essential element is the absence of the contrariant ideas to a quite abnormal degree. Association is common to all states of mind, and the limits of consciousness are often much narrower in the waking state than in hypnosis, so that it does not help matters to bring them in as differentiating marks of suggestion.

Fuller and better is the definition of suggestion given by Dr. von Schrenk-Notzing.² "Suggestion is the narrowing of the association-activity to definite

¹ Dr. O. Stoll, *Suggestion und Hypnotismus*, 2nd ed. 1904, p. 3.

² Dr. Th. Lipps, *Zur Psychologie der Suggestion*, Discussion, p. 33.

contents of consciousness, solely through the employment of memory and imagination in such a way that the influence of combinations of contrariant ideas is weakened or removed, as a result of which the intensity of the suggested content of consciousness rises above the normal." Here again the "narrowing of the association-activity to definite contents of consciousness" is common to all states of the waking mind, and should, therefore, not be given as in itself an explanation of hypnosis; but the aloofness from sensory experience, the absence of contrariant systems, and the resulting intensity of the idea in consciousness, are well brought out.¹

¹ The importance of limiting the meaning of the term suggestion "at the outset" is shown by its employment in a misleading sense by so eminent a writer as Dr. G. F. Stout. To the general position that ideas brought into combination tend to modify one another, and that if of a previously experienced train of ideas, one of them be brought up by an idea which is similar to but not exactly like it, the remainder of the ideas will be reintegrated in a relatively altered form, he gives the name of "relative suggestion." "If the presented content b has formed part of a presented whole bc , then the presented content β when it recurs, will tend to call up a whole $\beta\gamma$ formally corresponding to bc ." As examples of this he gives the variation in the meaning of a word according to the context. "Consider the variations in the meaning of the word 'home' in the following sentence: 'I am going home.' This may mean something different according as I say it on my death-bed or to a friend in the street." Or the term is applied to the guidance given to the mind by a series of ideas standing to one another in some uniform and progressive relation. A subject is shown a series of shades of colour in a scale ascending gradually from the deepest to the lightest, but in which one shade is omitted, and is asked to supply the missing colour. If he succeeds, "it must be noted that, for our purpose, the question whether the person has had experience of this particular shade of colour before is irrelevant. By hypothesis it is not the associations which it has acquired in our previous experience of it which now recall it. What is really operative is the form of the series. Represent the series by $B_1B_2B_3B_4B_6$; B_4 and B_6 suggest B_5 , not because they have been previously associated with B_5 , but because $B_3 : B_1 :: B_4 : B_6$ and $B_4 : B_3 :: B_6 : B_5$ " (*Analytical Psychology*, ii. p. 55).

Again, "A very clear instance of relative suggestion is supplied by the singing or mental repetition of a tune in a different key from that in which it has been previously heard. The absolute is not given by the key-note, which may vary. The identity of the tune is preserved by correspondence in the transition between the notes" (*Ibid.* ii. p. 57).

All these cases illustrate the law of psychological relativity. My previous experiences, though now forgotten, the present content of my consciousness,

We may now consider some of the other characteristics of the flow of ideas in hypnosis. It must not be supposed that all suggestions are adopted with equal facility. If the proposition made to the subject is greatly opposed to his habits or his convictions it may be rejected. A subject will refuse to pummel the man whom he has worsted in a wrestling-match, because this is inconsistent with his kindly disposition. He may need persuasion before he will drink whisky, since this is contrary to his habits. Even in hypnosis, therefore, the inhibition of resistance and the destruction of personality is only partial. This is borne out by abundant testimony.¹

my subconscious feelings, and my conscious aim, all modify profoundly the manner in which I grasp or apperceive a newly-presented idea, and determine the nature and direction of the association train set up by it. The term "relative" used in this connexion is legitimate; to employ the word "suggestion" is merely misleading. The idea or the series of ideas tends to exclude contrariant ideas only in the sense that all ideas or series of ideas which occupy the mind, by this very occupation exclude competing ideas that tend to dislodge them. In the instances given above, "suggestion" is simply the introduction of ideas, and if the term be used as loosely as this, all initiation of thought is suggestion, and every idea that is attended to in a train of association is a suggestive idea, in that it tends to call up some other idea in a manner or with an aspect that suits the context. This use, as we have seen, obscures the salient features of suggestion, and, as will be evident later, leads to a misapprehension of their real nature. It is only fair to say that farther on in the same work Dr. Stout, in his description of suggestibility, uses the term in its proper sense. "In the mind of a suggestible person apperceptive systems are excited almost wholly by the commands, words, gestures, etc., of another person, and not by their own mutual competition and co-operation. It follows that conflict is almost absent except in so far as conflicting groups are simultaneously excited by suggestion" (*Analytical Psychology*, ii. 154).

¹ "It is generally very difficult successfully to suggest anything that is opposed to the confirmed habits of the subject. For instance, suggestions are made to a devout Catholic, but directly the suggestion conflicts with his creed it will not be accepted. The surroundings play a part also. A subject frequently declines a suggestion that will make him appear ridiculous. A woman whom I easily put into cataleptic postures, and who made suggested movements, could not be induced to put out her tongue at the spectators. In another such case I succeeded, but only after repeated suggestions" (Moll, *op. cit.* p. 188).

"The somnambulist might, I believe, be made by frequent induction of hypnosis to do foolish and even criminal acts, but no suggestion made to an

A consideration of memory in hypnosis brings out some further characteristics of abnormal suggestibility. In the waking state that succeeds all except the lighter hypnoses, there is a complete loss of memory for the contents of the mind during hypnosis. The subject, however, while in this hypnotic dream remembers all the events of previous hypnoses, so that if he is frequently hypnotised during a term of years, there come into being two distinct memory series each independent of the other. If the waking memory be represented by W and the hypnotic memory by H , then if the succession of states is symbolised by $W_1H_1W_2H_2W_3H_3W_4H_4W_5H_5$, there is one continuous memory series $W_1W_2W_3W_4W_5$ and another $H_1H_2H_3H_4H_5$. The series $H_1 \dots H_5$ displays some special features that distinguish it from the series $W_1 \dots W_5$. If care be taken to avoid the suggestion of improved memory, which, if effective, would vitiate the experiment, the hypnotic memory is weaker than the waking memory. According to Max Dessoir, who put a subject through some of the ordinary tests for immediate memory, the hypnotised person remembers fewer syllables than does he when awake.¹ On the other hand, under the influence of suggestion, the power of remembering bygone events seems to be greatly increased, and the subject, if told that he is at some previous date in his existence, will reproduce details with extraordinary facility.

ordinary subject will be executed unless it be in accordance with his wish. For instance, it would be useless to suggest to a staunch teetotaller in any stage of hypnosis short of somnambulism that he should drink brandy. The suggestion would defeat its own end by arousing indignation and disgust. Such a suggestion made to a somnambulist might be obeyed the first time, but it would probably require frequent repetition to break down resistance and overcome his individuality" (C. Lloyd-Tuckey, M.D., *Treatment by Hypnotism and Suggestion*, 4th ed. 1900).

¹ Moll, *op. cit.* p. 140.

To what extent these details are really accurate has not yet been clearly shown, but undoubtedly events which have been completely forgotten in the waking state recur in the hypnotic state with some degree of accuracy, and there are cases in which the command of a language completely forgotten by the normal memory has been partially recovered by the hypnotic memory. Apart from these differences, the two memories function in the same way according to the ordinary laws of association and redintegration.

The hypnotic memory brings into prominence a peculiar feature of hypnosis. The mental system tends to split up into a number of independent series, each working in a relatively water-tight compartment. This tendency is further illustrated by the rapid change of personality that can be produced within one state of hypnosis. The subject is first told that he is the Emperor of Germany, adopts this suggestion, and speaks and acts in the manner that seems to him suitable. Within the limits of this personality he will be consistent, his memory will be continuous, and he will reject suggestions that are not in keeping with the part. The suggestion of a fresh personality is, however, readily taken up: the next minute he will become the President of the United States, and a few minutes later he may be a Red Indian or a Japanese general, and for each of these states his imagination, aided by a memory which is continuous for the character, will suggest a suitable system of ideas and of actions.

This dissociation of the whole psychical system and disintegration of the unity which characterises the normal waking state is the great characteristic of hypnosis. The inability of the contrariant or critical

idea to function when a suggestion is made or a command is given is only one instance of it. Just as various systems of memory series are split off from one another and have a relatively independent existence, so the whole system of ideas that represents the results of definite experience as well as general notions of what is probable or of what is fitting is put on one side, the painter is slipped, and a small idea-system is left to float, a frail bark, on the waves of imagination, guided first in one direction then in another by every fresh suggestion that takes the helm.

The close connexion of dissociation with suggestibility and the symptoms of hypnosis is strikingly illustrated by the cases of plural personality that have been under investigation of recent years. In both France and the United States psychologists have had under observation patients who seem to combine two, three, or even more personalities, and who shift from one to the other in an unaccountable manner and after varying intervals of time. Of the different personalities united in the same individual one has sometimes a full knowledge of the others, but more often their memory systems are entirely or almost entirely independent of one another. These subjects, even when not in the state of hypnosis, present many of the curious phenomena often associated with it. Their powers of sense-perception are unusually keen, and negative suggestions producing sense-anæsthesia can be made.¹

There still remains to be considered an important characteristic of suggestion, and this perhaps the one of most interest to the educator. If a suggestion is made

¹ See Appendix, p. 195.

in hypnosis, in spite of the discontinuity of memory, there is always a tendency when the waking state is resumed for fragments of the suggested ideas to remain on the fringe of consciousness, unless they are removed by express suggestion or command before the subject is awakened. Further, if during hypnosis it is suggested that a certain act shall be performed, the suggestion very frequently takes effect in the waking state which follows.¹ The subject, however, when he feels an impulse to perform some strange action does not ascribe it to the influence of the hypnotiser, but looks upon it as originating with himself, and tries to justify it.²

¹ "I hypnotise the subject F. when she is in bed, and tell her to dress herself when she awakes, to go to the end of the room, to come back, and to get into bed again. I rouse her out of the hypnotic state. She begins to dress. 'Why do you dress?' I ask. 'I have something to do,' she replies, and adds that it is unpleasant to dress with people in the room. When dressed she goes to the end of the room, comes back, and returns to bed. On waking she is much surprised to find herself in bed with her clothes on. On another occasion I said to her when hypnotised that on awakening she would not see Brousse (who was really there), but that she would see Mossé, who was not. On waking she began to speak to Mossé, whom she thought she saw, and when Brousse (whom she did not see) answered, 'How is it,' she said, 'that I hear M. Brousse, but that I do not see him, and that M. Mossé, who is in front of me, does not speak?' The hallucination, both positive and negative, was but visual" (Grasset, *op. cit.* p. 301).

It is interesting to note that the subject feels an impulse to dress, looks on it as originating with herself, and tries to excuse it.

² An example given by Moll illustrates this well. "I say to a hypnotised woman, 'After you wake you will take a book from the table and put it on the book-shelf.' She wakes and does what I told her. When I ask her what she has been doing, she answers that she has moved the book from the table to the shelf. When asked for her reason, she says, 'I do not like to see things so untidy; the shelf is the place for the book, and that is why I put it there.' In this case I suggested an action to the subject; she does not remember my order, but believes that she has so acted of her own accord from love of neatness."

Again, "I tell a hypnotised subject that when he wakes he is to take a flower-pot from the window, wrap it in a cloth, put it on the sofa, and bow to it three times. All which he does. When he is asked for his reasons, he answers, 'You know, when I woke and saw the flower-pot there, I thought that, as it was rather cold, the flower-pot had better be warmed a little, or else the plant would die. So I wrapped it in the cloth, and then I thought that as the sofa was near the fire, I would put the flower-pot on it; and I

The suggestion often works after a considerable lapse of time. A case with a duration of 63 days is given by Bernheim, of 172 days by Beaunis, and of one year by Liégois.¹ In some cases, in addition to the retention of the suggestion, a kind of subconscious calculation seems to be carried on at the same time. A young woman was told to address an envelope to Dr. Bramwell 12,500 minutes from the moment of awakening, and carried out the instruction accurately.

The principle of post-hypnotic suggestion is the basis of all therapeutic hypnotism, and while it is no part of the aim of this essay to advise or to discuss the use of hypnotism in moral training, the whole subject of suggestive medicine is so closely allied to that of suggestive education that no apology need be offered for giving a few cases.

Dr. Lloyd-Tuckey gives a table of cures of alcoholism by hypnotism, showing that out of 22 cases which were strongly inherited, and where several members of the same family suffered from chronic alcoholism, 5 were completely cured; while out of 43 cases where there was no such hereditary disposition, 10 were completely cured.²

Liébault cured a man of the symptoms of nicotine poisoning and of the desire to smoke in a week. At the Nancy Congress on Hypnotism he gave an account of a child, seven years old, who was so obtuse as to be almost an idiot. This child was subjected to hypnotic treatment, and so benefited by suggestion that in three months he

bowed because I was pleased with myself for having such a bright idea.' He added that he did not consider the proceeding foolish; he had told me his reason for so acting" (Moll, *op. cit.* p. 170).

¹ Grasset, *Hypnotisme et Suggestion*, p. 314.

² Lloyd-Tuckey, *op. cit.* p. 210.

could read, write, and understand the four rules of arithmetic.

Lloyd-Tuckey has tried hypnotism in twelve cases of stammering, and in half of them has found it useful. In two cases, those of schoolboys, complete cure resulted, and in three cases there was so much general improvement that little inconvenience remained.¹

A remarkable case of moral treatment was reported from the Salpêtrière. In 1884 a young woman of a deplorable type was admitted. She was a criminal lunatic, filthy in habits and violent in demeanour, with a lifelong history of impurity and theft. She was treated by hypnotism, and afterwards became a nurse in a Parisian hospital. At the second international Congress of Experimental Psychology, Dr. Bérillon, in a paper on the application of hypnotic suggestion to education, stated that he had treated with success such matters as cowardice and moral perversity. Dr. Osgood Mason also gives some interesting cases.

1. A girl, fifteen years old, in a New York Grammar School. She was a good reader of history and biography and the better class of novels, but had no aptitude for class studies. She could not concentrate her mind on details that did not specially interest her, and could not remember her lessons. Teachers were engaged to give her special lessons to prepare her for the entrance examination to a Normal College, but they reported that she was hopeless. Hypnotic suggestion was tried. It was suggested that she would be able to concentrate her mind on her studies, that her memory would be improved, and that she would lose her excessive self-consciousness and timidity. After six treatments

¹ Lloyd-Tuckey, *op. cit.* p. 182.

she improved wonderfully, and passed an excellent examination.

2. A little boy, seven years old. He was a terrible cry-baby, afraid of the slightest pain, and considered a coward by his playfellows. It was suggested that he would no longer be a crying, whimpering coward, but a strong, brave boy, and that he would stand up sturdily for his rights among his playfellows. After these suggestions there was an immense improvement.

3. A tall, pale, flabby boy, aged sixteen. His habits were immoral, he smoked cigarettes to excess, his memory was impaired, he was dejected, dull, and unmanly. He was under hypnotic treatment for two and a half months. As result the immoral habits were cured in one month, the cigarettes were reduced to one a week, his memory and his interest in his work were greatly improved.

4. A lady, an excellent pianist and teacher. She was unable to perform efficiently in public because of excessive nervousness and self-consciousness. Under suggestion her self-confidence was restored to her.¹

Dr. Mason asserts that the cures by hypnotic suggestion are just as lasting and become just as much a part of character as those made by ordinary education and persuasion. Of this it would be well to have more detailed evidence than as yet has been forthcoming. The surgeon who enters a case in his books as a success because the patient has not died under treatment, or appears to be in good health a few months afterwards, is only too familiar; and, as far as can be ascertained, sudden religious conversions, which, consisting as they do of the introduction of a new guiding idea under the

¹ R. Osgood Mason, M.D., *Hypnotism and Suggestion*, 1901, p. 149 *sqq.*

mental dissociation produced by a strong emotional state, have many analogies with suggestion, are by no means always productive of a stable disposition. Making all allowances, however, these cases call for serious consideration, and cannot be overlooked by those who are responsible for the education of the young.

There are many stages of the hypnotic trance.¹ In the lighter ones the patient never loses consciousness, while in the deeper ones he ceases to be in relation with the outer world and hears only what is said to him by the operator. For some of the experiments quoted above, such as those on sensory anæsthesia, an advanced stage of hypnosis is necessary; but for many of the simpler phenomena the earlier stages are sufficient, and for therapeutic suggestion it is found that the earlier stages are as effective as the later ones. The increased force of suggestion, says Lloyd-Tuckey, "does not

¹ Liébault gives the following classification:—

1st Degree.—The patient feels a heaviness of the eyelids and a general drowsiness. He is conscious of what goes on around him.

2nd Degree.—This is characterised by suggestive catalepsy. When the operator places the arm in a certain position, and says that it is to remain there, it is impossible for the patient to put it down. It remains rigid and fixed for a much longer time than would be possible in the natural state. In this stage there is almost complete consciousness, and often the patient denies having been in the hypnotic state because he has heard and remembers every word that has been said to him. A very large number of people never get beyond this stage.

3rd Degree.—In this also the patient is to a certain extent conscious of everything around him; but he is oppressed by great sleepiness. A movement communicated to a limb is automatically continued.

4th Degree.—In the fourth degree the patient ceases to be in relation with the outer world. He hears only what is said to him by the operator.

5th and 6th Degrees.—These stages, according to Liébault, constitute somnambulism. After the former, recollection of what occurred during sleep is indistinct; after the latter, the patient is unable to recall anything spontaneously. All the phenomena of post-hypnotic suggestion can be induced in this condition.

Bernheim finds nine stages, but his classification is merely a development of Liébault's, and similarly traces the development of hypnosis from the stage of torpor to the somnambulistic stage.

depend so much as one might suppose on the profoundness of the sleep. . . . My own experience, like that of all observers whom I have known, is that good results are effected when there has been no loss of consciousness, and even when the patient denies having felt any hypnotic influence."¹ With this Dr. Osgood Mason is in agreement. "More good is accomplished by the slower process of repeated suggestion upon cases in which the hypnotic condition is only partially secured, and in which neither unconsciousness nor absolute anæsthesia accompanies the processes employed ; and this is the use of suggestion to which I would especially apply the term educational."²

It is evident, therefore, that a mental state which is very little different from that of ordinary waking consciousness is included by the authorities among hypnotic states, and for therapeutic purposes is considered to be as good as, if not better than, the profounder hypnoses. In what respects ordinary consciousness is unlike the earlier stages of hypnosis must be our next consideration.

¹ *Op. cit.* p. 53.

² *Op. cit.* p. 142.

CHAPTER II

SUGGESTION IN THE WAKING STATE

MOST of the features that are to be found in hypnotic suggestion have their counterpart in the normal waking state. While the idea of a blister on the right arm will not originate one, the idea of a pain or of irritation in any part of the body is often quite sufficient to produce it. If a subject is made to believe that a vein in his arm has been opened, and if this belief is intensified by the sound of trickling water, he will show all the symptoms of bleeding to death. To brood over an ailment is the surest way of combating all efforts to cure it.

With many people the mere statement that they are blushing is enough to produce a flow of blood to the face; the repeated assurance that they are warm or cold will tend to make them feel warmer or colder. In the same way, if you assure an unsuspecting friend that there are cattle on the side of a distant hill, he will be ready to agree that he sees them; or when told that a church bell can just be heard in the distance, he will imagine that he hears it. Still more is imitation common in ordinary life. Few of us can for long be with people who have peculiar habits of movement without feeling a

tendency to imitate them. As is well known, stammering is frequently communicated from one child to another. In matters that are not of vital importance to the conduct of life, such as fashions in clothes and in foods, we slavishly imitate our neighbours; and even in weightier matters, such as systems of belief or moral standards, we tend to adopt without question those that we find around us.

When conversing with a cheerful, amusing, and witty man, we instinctively feel cheerful ourselves, cap his jokes with our own, and come away feeling that we are, really, not such dull dogs as we thought, though in this case we generally take the credit to ourselves. Similarly, intercourse with a lugubrious friend makes us melancholy and dull, and in this case we are accustomed to blame the friend. In both instances the cause is probably motor imitation. The man whose spirits are contagious frequently has a mobile face. His feelings are reflected in the play of his features; we naturally tend to imitate this, and the state of feeling that corresponds with the imitated expression is produced in our minds. Closely connected with imitation is the influence exerted on social life by the idea-situations to be found in novels. Whole systems of ideas that deal with social situations or with ideals find their way into our minds, and quite unconsciously exert a profound influence upon our lives. Many men who pride themselves on their power of resisting external influences go through life as the most servile imitators in every department except that in which they resolutely determine to be unlike other people. Indeed, it may be argued that, just as mechanical habits are necessary in order to give leisure for the acquisition of fresh powers, so a

complete acceptance of the recognised social institutions, of the fashion in hats, foods, and drinks, leaves the total energy of reaction undivided to break a fresh channel for itself through some one barrier of consolidated custom.

Neither is dissociation peculiar to abnormal states. Although the mind is an organic whole, and although in the healthy state relations of unity exist between the dispositions left by past experiences and the present content, it is none the less true that unless within this dominating unity the total mental system admitted of cleavage in every direction, split itself up vertically and longitudinally, refused the right of way between adjoining sub-systems, and left important groups to function of themselves, ready to come into the central conscious life whenever their presence is needed, the conduct of thought would be impossible. At the very beginning of mental life dissociation comes into play, when through selective attention ideas are detached from the background of contiguous association and enter into fresh combinations under the direction of a guiding idea. Forgetfulness, which to most people is a habit to be combated, is a kind of dissociation, and is essential if memory is to perform its function. Unless the great mass of percepts and ideas that find their way into the mind sank rapidly below the margin of consciousness, the stage would become too crowded.

The fundamental division of mind into consciousness and subconsciousness, and the varying degrees of relationship in which subconscious ideas stand to consciousness and colour the ideas in it, are instances of the natural tendency of the mind to manifoldness. Education to a great extent consists in organising in the mind large

tracts that can function independently and can switch themselves off from the influence of conscious or subconscious processes. Each fresh interest that is organised represents a relatively detached system, each fresh subject that is taught is coextensive with a grouping of ideas to which the learner is made to confine his attention to the exclusion of all others. A language when acquired is an admirable example of a closely related group within which association will be strictly confined. If I have switched on my system of ideas for German and am hunting for a suitable word to complete a sentence, my subconsciousness is too well trained to bring me up a French word or a Greek word. Even if I cannot find the word, and have nothing in consciousness but the blank of interrogation, words from other languages are inhibited, or if by chance they present themselves, are immediately rejected as being illegitimate intruders.

Many men bring to the front a totally different system of ideas, and with it different manners and sympathies, according as they are dealing with inferiors, equals, or superiors. I stay in one house where the interests of my friends are purely philosophical, and go on to another in which golf or horse-racing is the prevailing influence. Relative dissociation takes place in each case and unsuitable interests are repressed. If a versatile man, I may combine the life of letters with that of a practical farmer, but the two systems fall sharply apart, and may have the smallest possible influence on one another.

More striking is the process when I will to dissociate my ideas. The determination to put a phase of mind resolutely on one side is illustrated when I withdraw my

attention from an interesting novel and concentrate myself on a distasteful task, or when a business man whose affairs are in a shaky condition, and who needs for their conduct all the strength and coolness that he can muster, resolves to leave his worries behind him when he quits his office and to keep his home life and interests entirely separate, in order that he may preserve his health and his sanity. In the beginning such a process of abstraction needs a considerable effort; in the long run it may become second nature.

It is evident, therefore, that the relative independence of great sections of mind is not only not unusual, but is essential to mental development. If we take the last of the processes which stand out as peculiar in hypnosis, namely, post-hypnotic suggestion, we shall find that this, too, has its analogue in ordinary life. Its essential nature consists in this, that an idea introduced into the mind when dominated by a certain set of ideas or a certain aim, comes into operation later after a period during which the original set of ideas has passed into obliviscence. This is, however, one of the commonest features of the waking state. Our minds are full of latent ideas which from time to time surprise us by coming to the front and taking up a commanding position. We have probably forgotten when or how we first experienced or originated them, though we may have our suspicions, but of their presence and their power there is no doubt. Many people can train themselves to wake up at a certain hour, or can make up their minds to perform some action in a week's time. The idea is then dismissed from the mind; but if the subconsciousness has been properly trained, the sleeper will awake and the action will be performed, although

neither the thought of waking nor the idea of performing the action may have been in the mind from the moment that the resolution was taken and then put on one side to make room for sleep or for other ideas.

In the waking state, then, we find the very same phenomena that are so noticeable in the state of hypnosis. Ideas tend to produce vaso-motor changes or to actualise themselves as sensations or perceptions, there is a strong tendency to imitate movements and to accept ideas that are in the air, the dissociation of psychical states seems to be an essential for sound mental processes, and, finally, when once it has been introduced into a mental system, an idea tends to persist and to overflow into action or belief after a considerable period of inertness.

The difference between the two states is largely one of degree. Psychic processes are in their origin sensori-motor or ideo-motor ; that is to say, in the primitive mind a feeling or an idea tends to express itself in action at once. Feelings of pleasure and pain express themselves in motion towards and motion from the object which gives rise to them. For the dog the idea of rat-which-can-be-pursued resolves itself immediately into the action of pursuit ; for the small child the perception of his mother whom he has not seen for a few hours is enough to make him run towards her ; for the boy the notion of a game of cricket translates itself into "cutting" a school hour. At a higher stage of development this original tendency of the feeling or idea may be obstructed. The moth flies into the candle automatically, while the man may inhibit the idea-impulse that he should enter the public-house ; the dog rushes after the rat, while the man checks his tendency to strike

his enemy or to run after his friend. The older boy would like to cut a school hour and play cricket, but the tendency of the idea to develop is blocked by other more powerful ideas and impulses. At the extreme end of the scale the impotence of the idea as an initiator of movement becomes clearly marked and is well illustrated by the man who lies in bed in the morning and resolves to get up. He may place the idea in the focus of consciousness, and attempt to strengthen it by heaping round it ideas of the advantages to be derived from early rising, but none the less may remain in bed for another hour. The abnormal state of aboulia shows how complete may be the separation between the idea and the movement with which it is naturally connected. In this condition a man may be unable to perform any of the actions which he has it in his mind to do, although he may cognise them and will them.

In fact, the energy of any idea is determined less by its intrinsic nature than by its relative strength as compared with the ideas which impinge upon it; indeed, apart from the original tendency of an idea to be accepted or to be realised, which may be looked on as its energy, it is probably misleading to talk of one idea as having more force than another. Its actual influence on the psychic complex will depend entirely on circumstances.

A certain portion of the mental content is attended to and becomes the idea which fills the focus of consciousness. Suppose it to be the idea of giving the whole of one's property for charitable purposes. As an idea this possesses the constant energy of all ideas in the tendency to realise itself. But the field is not clear for it. It is obstructed (*a*) by the inherited impulses and tendencies

of self-protection, which incline one to make certain that one's own welfare is assured; (*b*) by the impulses arising from habit, which look askance at the tendency to give more than the small portion of income which is usually assigned to charity; (*c*) by a number of family prudential ideas, such as the duties of educating one's children or of assisting poor relatives; (*d*) by the fear that indiscriminate charity may do harm. As a result the incipient tendency to the renunciation of worldly goods is strangled at birth, and its only contribution towards the mental system in which it occurs is that of initiating a train of association. On the other hand (*a*) I may be the possessor of professional skill which enables me to earn my livelihood with ease, and may therefore be in no fear of indigence; (*b*) I may have inherited the fortune suddenly, and therefore may have no established habits of dealing with money on a large scale; (*c*) I may dislike my children and my relatives; (*d*) I may be ignorant of the economics of social life. In this case the idea will be operative, and yet it is *ex hypothesi* the same idea as in the former case; the same impulse to give combined with the same conception of suffering, and the same anticipation of the pleasure to be derived from munificence to others. Stated schematically, an idea A introduced into a mental system has a tendency by association to call up other ideas and impulses B, C, D, which may be (1) contrariant, critical, and inhibitory; (2) sympathetic and furthering. This is its total association value, and it works equally in all directions; it calls up ideas that are friendly to it and also ideas that are hostile. This enumeration does not exhaust its latent powers. It possesses also a suggestive energy which may be converted into

suggestive force, and which overcomes or avoids the resistance offered to it so that action results.

These two qualities of an idea must be clearly distinguished. The associative tendency is not necessarily a tendency to action or belief. I may mass together a number of ideas that deal with a certain line of conduct, but the result may be no more than a clear understanding of the positions; for increased insight by no means leads to action if there is in existence a system of opposed ideas and impulses, and such a system is often called into existence in proportion to the size of the favouring system; while, on the other hand, an idea in so far as it is suggestive tends to realise itself quite apart from insight or understanding. If the resulting train of association is abnormal so that adverse ideas and impulses seem to be non-existent, this is due to the suggestive force of the idea, and an idea is suggestive in so far as the train of association which it initiates is partial, or, in other words, in so far as it realises itself notwithstanding the existence within the total mental system of possible inhibitory ideas.

In a fully developed mind, therefore, the suggestive force of an idea or idea complex is conditioned by a tendency to dissociation or compartment working, and this, as we have seen, is an essential feature of healthy mental life. It is, however, necessary to draw a sharp distinction between the dissociation of the hypnotic state and that of the waking active life. The waking life of the mind, in so far as it is efficient, is a continual struggle. My mental existence, my personality as a conscious being, consists of a complex of aims or ends on the attainment of which my efforts are concentrated. In the adolescent these aims are relatively few and

simple ; in the adult they are numerous and form a kind of hierarchy. Dominating my entire life of thought and impulse is some far distant goal : it may be the desire to attain religious peace of mind, or to succeed as a social reformer or as a constructive thinker ; or it may be merely the wish to succeed in a profession or to amass a large fortune. Ranked beneath this final aim are a number of subsidiary ends. As a means towards success in professional life it may be necessary for me first to cultivate my mental powers and my faculty of self-control, then to acquire a body of professional knowledge, and then to develop whatever power I may possess of getting on with my fellow-men, and of imposing my wishes upon them. The pursuit of each of these aims is relatively distinct. When a doctor is learning anatomy or physic, he is not at the same time wondering if his bedside manner will be good enough to contribute towards his success ; when a merchant is trying to organise a fresh market for his goods, he is not with the same system of ideas working out a scheme for raising more capital. But though the aims may be thus relatively distinct, they are all subordinated to one final goal ; the unity of the mind is paramount. The more the mind is pervaded by the desire to attain the final end, the more resolutely it will apply itself to each single end in turn to the exclusion of others, and the less it will allow itself to be called away from the business in hand by the other matters that are of equal importance for the fulfilment of the whole train of conation. The fully completed system will in respect of its discrete parts resemble a large business organisation, in which each department has its own function and concentrates its whole energy upon it, while all work

steadily towards a common goal. The more efficient the mind, the more complete is the dissociation of its parts, while at the same time the firmer are the bonds by which relations of unity knit it together. For its wholesome growth each fresh stage in organisation, each tendency to split up the total complex, must be accompanied by an equally strong tendency to unification. The maximum of discreteness must coexist with the maximum of homogeneity.

It is true that in certain cases it may seem questionable if the unity of the mind is furthered by discreteness. In the instance given above of the merchant who for the sake of his health and peace of mind has to put on one side all his business worries when he leaves his office, and to cultivate a different set of interests in his home, there appears to be certain loss of power; and in one sense this is true. It is impossible not to believe that his efficiency would be greater if his business were in a sound condition, and if his waking thoughts could always, without any danger to mental health, be concerned with its maintenance and development. But the value of dissociation is relative. In this instance the cleavage of mental life is essential, and is certainly dominated by relations of unity. To say that a mental system that is not under the necessity of thus dividing itself is more efficient, such a system as was to be found in John Wesley, whose entire energies, with the exception of the four hours' sleep that he allowed himself nightly, were concentrated on one purpose, is merely to say that some minds are situated more suitably than others for the development of their maximum force. Mind must develop as circumstances permit, and what is the best course for one mind may be only second best

for another. In all mental development that persists it will be found that dissociation, except in so far as it is necessary for the complete rest of one mental system that another system with relatively distinct aims should occasionally take its place, brings with it an increased consolidation of aims and a more intense unity of consciousness.

We have seen that suggestibility is impossible without dissociation, and that dissociation is of two kinds—the abnormal dissociation that we find in the hypnotic state, and the more normal type that accompanies self-control. Which of these two kinds is to be the conditioning influence of suggestion in the waking state must be discussed later.

CHAPTER III

EXPERIMENTAL STUDY OF SUGGESTION IN THE WAKING STATE

A NUMBER of observations have been made both in schools and in laboratories on suggestion in the waking state, and a consideration of these will throw light on its true nature. Of especial interest are some experiments conducted by M. Binet in Parisian schools.¹

1. The headmaster of the school, following M. Binet's instructions, announced to a class that he was going to make an experiment on their memory of the length of lines. A line 5 centimetres long ruled on white cardboard was shown to each boy, who after looking at it had to draw it as accurately as he could on a sheet of paper. The class were then informed that they would be asked to draw another line, a little *longer* than the first, and were accordingly given a second line to copy. In reality, however, it was *shorter*, being only 4 centimetres in length.

Only 9 of the 86 children experimented upon resisted the suggestion, and believed their eyes and their memories rather than the statement made by their master; the remainder all made the second line larger than the first.

¹ A. Binet, *La Suggestibilité*, 1900.

2. In this experiment, as in the first, the boys were asked to draw lines from memory on squared paper, but the suggestion instead of being given by word of mouth was given by the lines themselves. The boys, as before, were told that the object of the experiment was to test their memories. "We are going to make an experiment on the accuracy of your eye. We are going to see if you are able to reproduce the length of a line. I shall show you a line which is, say, 5 centimetres long, and you will reproduce it from memory. We shall thus see if your eye is accurate. Some people are so inaccurate that when they reproduce a line which is 5 centimetres long they make it 10 centimetres; that is a great error. Others make it only 2 centimetres long. You must try to be as accurate as you can."

After this exhortation the boys were shown 12 lines in succession. These lines, with the exception of 4, increased in arithmetical progression thus:—

Order of Lines.	Length.	Order of Lines.	Length.
1	12 mm.	7	72 mm.
2	24 mm.	8	72 mm.
3	36 mm.	9	84 mm.
4	48 mm.	10	84 mm.
5	60 mm.	11	96 mm.
6	60 mm.	12	96 mm.

It will be seen that numbers 6, 8, 10, and 12 were traps laid for the unwary boy, to see if the directing idea of uniform increase given by numbers 1 to 5 of the series was sufficient to counterbalance his perception of the line presented.

Of 45 boys who were the subjects of this experiment none avoided all four traps; 3 succeeded in avoiding two, and 7 others avoided one. The directing idea of

uniformly increasing length thus affected 35 boys, or 77.7 per cent of the total number.

This experiment was repeated in a slightly different manner. The following series of 36 lines was presented to the boys:—

Order of Lines.	Length.
1	12 mm.
2	24 mm.
3	36 mm.
4	48 mm.
5-36	60 mm.

Of 42 boys subjected to this experiment, only 2 reached their maximum length by the 7th line, 13 reached their maximum between the 7th and 17th, 13 between the 20th and 26th, 10 between the 28th and 34th, while 9 manfully went on making their lines longer up to the last line shown them. (Not all were shown the total number of 36 lines.) Thus the directing idea given by the first five lines seems to have been effective, and in the case of 9 boys to have been absolute.

After the completion of the experiment, the boys were asked a number of questions, of which the following will serve as illustrations:—

INTERROGATION OF JEAN GOUGÉ

Q. Are you satisfied with the lines you have drawn?

A. Yes, sir.

Q. Do you think you have made no mistakes?

A. No, I have made some.

Q. What kind of mistakes?

A. My lines are not of the same length as those you showed me.

Q. What mistakes have you made?

A. My lines are longer.

Q. How much?

A. I don't know.

Q. If I were to tell you that you might correct them, what alteration would you make?

A. I don't know. As I looked at them I said, "They are a little longer than those shown me."

Q. Show me how far you would go in correcting.

A. About so far. (He shortens the lines.)

Q. Why did you make them too long if you knew that you were doing so?

A. I don't know.

INTERROGATION OF DIEM

Q. Did you see your mistake when you were drawing the lines or after you had finished them?

A. I saw it while drawing them; I said to myself, "I have made them too long."

Q. Why did you go on making them too long?

A. *Because I was afraid you would make me begin all over again.*

Most of the boys when asked stated that they knew that the lines were too long, and M. Binet suggests¹ that they were half aware of the illusion that the suggestion produced. Two-thirds of the boys when asked why they continued to make the lines too long, answered that they did not know. The remainder gave some reason which in most cases was obviously unreal. M. Binet points out² that the questions put to the boy rouse him out of a state of mind which is analogous to hypnotic sleep, and awake the critical sense which has been drowsing. It is, at any rate, striking that the

¹ *Op. cit.* p. 142.

² *Op. cit.* p. 143.

attempt to give some reason, even though a foolish one, for what he has done resembles the tendency of the subject of post-hypnotic suggestion to account for and justify his action.¹

Of mistakes produced by a guiding idea of this kind, M. Binet says: "As the error arises in the subject himself, and is the result of an auto-suggestion, the responsibility rests with him alone; the experimenter does not contribute towards it."²

3. The subjects, 23 in number, aged seven to fourteen, were shown the following series of coloured wools, each placed on a white card:—(1) Blue, (2) greyish blue, (3) greenish blue, (4) bluish green, (5) green, (6) yellowish green, (7) moss green, (8) olive green, (9) yellow.

Each boy separately was shown the colours in order, and was told that he was to be examined to see if he knew the names of the colours; that he was to look at each colour, to say its name aloud, and then to write it on the paper placed before him. As a rule, the subject when shown the 2nd, 3rd, and 4th colours called them green, upon which the experimenter said, "No, blue." The great majority took up the suggestion at once and wrote "blue" on their papers. The attitude of the children when the suggestion was given is worth considering. Three types of attitude can be distinguished. (1) The boy takes it calmly and passively, expresses no surprise, and writes what is suggested to him. (2) The boy is perplexed by the statement, grows red, and looks at the experimenter with astonishment, frowning to conceal his embarrassment. (3) The boy's attitude is one of revolt, and he expresses his scepticism in familiar language, saying, "Oh, that's what you call blue is it?"

¹ *Vid. sup.* p. 17.

² *Op. cit.* p. 206.

4. Eighteen lines, each 60 mm. in length, were shown in succession to 25 boys. The boys had to mark off on squared paper a certain distance from a vertical line equal to the line shown them.

The first line is shown in silence. With the second the suggestion is made, "Here is one which is longer"; with the third, "Here is one which is shorter," and so on alternately.

Only 9 boys resisted the suggestion more than four times, 3 resisted only once, while 8 succumbed to all the suggestions.

The same experiment was made on 10 boys in an *École Primaire Supérieure*.

Only 2 made as many as ten resistances, 1 made three, 3 made one, and 4 made none.

Here is the interrogation of a boy who made three resistances:—

Q. What do you think of the lines?

A. I think they are all about equal.

Q. When did you think this?

A. When the eighth line was shown.

Q. What made you think this?

A. *When you said "A little longer," the line was at the centre of the card; when you said "A little shorter," it was nearer the edge.*

Here it is to be noted that the subject continued to follow the suggestion even after the eighth line, when, according to his own statement, he realised that the lines were equal, and the reasons alleged in his last answer were wholly incorrect.¹

5. The group of objects given in Fig. 1 was shown to

¹ *Vid. sup.* p. 17.

24 boys for ten seconds. They were first asked to enumerate the objects in the picture.

The following table gives the number of times that each object was omitted :—

The stamp	.	.	.	10 times.
The ticket	.	.	.	9 „
The button	.	.	.	4 „
The <i>sou</i>	.	.	.	3 „
The portrait	.	.	.	2 „
The picture	.	.	.	Not at all.

The portrait and the picture attracted attention because of their size. The stamp is badly placed as it is in the right-hand top corner, and thus neither in the place where one begins nor where one ends when reading. The extent to which the ticket is forgotten is not easy to explain. It may be because the picture at the other side attracted attention away from it ; but in that case why was the *sou* better remembered ?

Detailed questions were then asked about each of the objects in the group. Those on the button may be taken as typical.

1. What is its shape ?
2. What is its colour ?
3. Is its colour simple or mixed with another colour ?
4. Of what substance is the button made ?
5. What is there in the centre of the button ?
6. How many holes are there ?
7. How is the button fixed on the card ?
8. How do the threads go ?
9. What is the colour of the threads ?

Questions 1 and 2 were answered for the most part correctly. Question 4 may be neglected, as it is difficult for a small boy to say of what substance an object is

made. Question 6 was answered correctly by 16 out of 25 subjects. Question 7 gave rise to many mistakes. 21 out of 25 subjects maintained that the button was attached by thread or fastened by a pin. Their answers were most precise, and when asked the colour of the threads, each of them stated that they were white, or black, or blue. When asked point-blank if they had seen the threads, 5 maintained that they had.

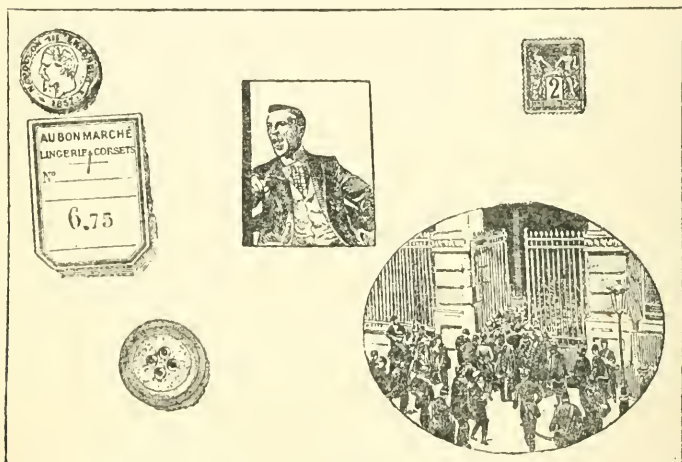


FIG. 1.

After Alfred Binet (*La Suggestibilité*, Picard and Kaan, Paris).

Another group of boys was then asked to write out from memory a description of the same objects shown in the same way. On this occasion very few of the incorrect details were given. No boy, for example, said that the button was fastened by threads. It is evident, therefore, that these detailed questions acted as suggestions. In part the boy when asked a question about some detail that he did not remember used his imagination in his

anxiety to oblige; in part the nature of the question actually suggested the answer to be given. The suggestive force of such questions varies very much according to the manner in which they are put. M. Binet tried three further experiments with three different sets of boys, to each of whom a special set of questions was given. We reproduce the questions relating to the button.

1st set:—

1. How is the button fastened to the cardboard?
2. Is it broken, or is it whole? Draw it.

2nd set:—

1. Is not the button fastened on to the cardboard with thread?
2. Is it not broken? Draw it.

3rd set:—

1. There are four holes. What is the colour of the thread which passes through these holes and which fixes the button to the cardboard?
2. Draw the button, showing the place where it is broken.

The results of these three sets of questions were as follows:—

	1st set.	2nd set.	3rd set.	
The thread . . .	3	4	10	} Number of subjects making mistakes.
The damage done to the button	0	6	6	

The number of specific errors here rises strongly as the questions are put in a more suggestive manner.

We have given these experiments at some length, because, besides illustrating the working of suggestion in the waking state, they give an opportunity of again considering the exact nature of the suggestive process. In examples 1, 3, 4, and 5, the suggestions were given from outside, and by the experimenter; in 2 it was the result

of a perception on the part of the subject uninfluenced by the experimenter. M. Binet classes all five experiments under the heading "suggestion," but there is a radical difference between 2 and the others. If every complex of ideas that is produced by a series of experiences, and which subsequently takes up a commanding position in the mind, is to be called "suggestive," every general state of the waking mind, every apperception, every prejudice will be a suggestion, and the term ceases to have any useful meaning. Or, if we consider the suggestive element as residing in the peculiar arrangement and presentation of lines made by the experimenter, we must then class as suggestions all the peculiar modifications of one perceptual element by another that are commonly called illusions. In that case, when in the well-known illusive arrangement given in Fig. 2, two equal lines appear to differ in length,

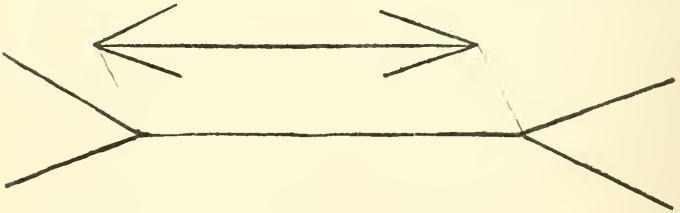


FIG. 2.

After L. Witmer (*Analytical Psychology*, Ginn and Co.).

or when a shade of grey varies considerably according to the background on which it is placed, the length of line and the colour actually perceived are "suggested" to me; or when water at 40° Fahr. feels cold after boiling water and warm after freezing water; or when tea with milk in it tastes sweet after an acid and bitter after a solution of sugar, all these are suggestions. Indeed,

every complex perception which is a composite of percepts and sensations that modify one another, must come under this heading, and the term is thus wholly discredited.

Nor does it improve matters to say with M. Binet, "The directing ideas that we have previously described are the work of the subject, and constitute auto-suggestions." In this sense every state of mind influenced by previous experiences is an "auto-suggestion," a word which we shall have to define more strictly later on.

M. Binet analyses the situation as follows :¹—"I take the opportunity of describing as well as I can the psychology of these very complex experiments on suggestion produced by a guiding idea. In these experiments we find a conflict between two different tendencies : (1) The tendency to perceive the equality of lines ; (2) The tendency to consider them as forming a series of increasing lengths. It is this second tendency that constitutes the guiding idea, and the illusion of the experiments is produced by the perception of the first five lines which really are a series of increasing lines. The subject, if he attends, cannot fail to notice this order, and probably notes it in his subconscious language ; in any case he sees it materially realised before his eyes by the position of the points which he marks on the paper. This guiding idea has made a strong impression on him, and he allows himself to consider that the order of increase must hold good for the whole series of lines. The supposition would appear absurd if stated as a formal judgment, as, indeed, would a number of other suppositions which guide our lives, and which are founded on arguments whose value is small. . . . The effect of this guiding idea is to prevent the exact perception of the lines.

¹ *Op. cit.* p. 199.

. . . Why does this idea . . . in the beginning a purely intellectual one, possess this force of obsession? *Through inertia.* If the subject enters the path shown by the guiding idea, it is because it is the line of least effort; it is easier to allow one's estimation of the length of lines to increase uniformly than to make a careful estimate of each line on its own merits. . . . Without entering into details, it seems to me reasonable to admit that the suggestion which influences the subject cannot fulfil itself except through the intermediary of phenomena of the unconscious or rather of mental disaggregation. The subject is ignorant of the idea that directs him, he does not know why he submits to it, although he finds it incorrect, and he invents reasons by which he explains his conduct to himself."

Thus the main characteristics, according to M. Binet, are three :—

1. The induction that lies at the basis of the guiding idea would seem absurd if stated in logical form.
2. The subject is unaware of the real basis, and invents false reasons.
3. The obsessing force is due to inertia.

No one of these is in any way more characteristic of suggestion than of any of the states of mind that guide our ordinary conduct. (1) The basis of few of our guiding ideas will bear much logical analysis. (2) As a rule we are ignorant, and refuse to be other than ignorant of the real motives of our conduct, and as habitually, we invent motives that suit our self-esteem. (3) If, because I have been swindled by one solicitor, I henceforth perceive all solicitors as swindlers; or if, because my experience as a doctor has frequently brought me into contact with one form of disease, I diagnose all my patients as

suffering from the same malady, I am taking the line of least resistance ; the state of my mind is one of "inertia." This phenomenon is as common in mental life as it is deplorable, and to call it auto-suggestion perverts the meaning of a useful word, and throws no further light upon the situation. The real problem of suggestion is rather this : If when the state of mind is neutral, or if when the guiding idea derived from past experience leads in a certain direction, a fresh idea leads me in a direction that apparently is not indicated by the neutral complex or is in actual opposition to the guiding idea, how is this to be explained, and how are such suggestive ideas to be introduced ?

Some light is thrown on the problem by the series of interesting experiments made by Dr. Boris Sidis on suggestion in the normal or waking state.¹ He distinguishes in the hypnotic state between direct and indirect suggestion. In direct suggestion the experimenter gives his orders as directly and definitely as possible. But this is only one method. "Suggestions may also be given in quite a different way. Instead of openly telling the subject what he should do, the experimenter produces some object, or makes a movement, or a gesture which in their own silent fashion tell the subject what to do. To illustrate it by a few examples so as to make my meaning clearer. I stretch out the hand of the hypnotic subject and make it rigid, and while doing this I press his arm with an iron rod. In the next *séance*, as soon as the iron rod touches the arm he becomes rigid. I tell the subject to spell the word 'Napoleon,' and when he comes to 'p' I stretch out my hand and make it stiff ; the subject begins to stammer,

¹ Dr. Boris Sidis, *The Psychology of Suggestion*, New York, 1898.

the muscles of his lips spasmodically contract and stiffen." This kind of suggestion, in which only a hint is given, is indirect suggestion.¹

Dr. Sidis draws a further distinction between immediate and mediate suggestion. When a person does or thinks exactly what is suggested to him, this is immediate suggestion; when he does something slightly different, for example, if he is told that on awakening he will see a tiger, but actually maintains that he sees a large cat, this is mediate suggestion.

Before proceeding to discuss the conditions of these several kinds of suggestion, Sidis gives some experiments designed to prove that man is suggestible. These experiments aimed at bringing out the relative values for suggestion of Repetition, Frequency, Coexistence, and Last Impression.

A series of nine letters was shown, one at a time, through a slit on a white screen. Each slip was shown for three seconds. At the end of the series the subject had to write down immediately the letter that first came into his mind.

The methods used and the effects of the various arrangements were as follows:—

1. *Repetition*.—In the middle of the series a letter was shown three times in succession, thus:

B E K M M M N O P. In 53 out of 300 trials the subject wrote down the letter suggested. 17.6 per cent.

2. *Frequency*.—A letter was shown three times in the series with interruption, thus:

B K E K M K C R D. In 128 out of 300 trials the subject wrote down the letter suggested. 42 per cent.

¹ *Op. cit.* p. 19.

3. *Coexistence*.—A letter was shown repeated in a massed form, thus:

R
B E C D R M L A F. Result, 20 out of 300 trials. 6.6 per cent.
R

4. *Last Impression*.—No repetition was used, the aim being to see what impression was made by the last letter.

A K F L D R B E M. Result, 190 out of 300. 63 per cent.

5. *Coexistence and Last Impression*.—

A
E N C K B M Q Z A. Result, 55 out of 300. 18.3 per cent.
A

6. *Frequency and Last Impression*.—

M C B C K C P N C. Result, 113 out of 150. 75 per cent.

COMPARATIVE TABLE

	Per cent.
Frequency and last impression	75
Last impression	63
Frequency	42.6
Coexistence and last impression	18.3
Repetition	17.6
Coexistence	6.6

The experiments are interesting, and it is worth while to ask what they really prove. Mr. Sidis says: "These experiments unquestionably prove the reality of normal suggestibility; they prove the presence of suggestibility in the average normal individual." But do they really prove anything of the sort? They show what combination of factors best leaves an idea in the mind; but the idea need not be a suggestive idea. In this case the idea of the letter that fills consciousness is not believed in any sense of the word. Neither is it really acted upon. The subject wrote down the letter

that was uppermost in his mind because he had been asked to do so, and not because of the suggestive force of the letter. If of two perfectly neutral courses of action, we will say those of ordering poached eggs or boiled eggs for breakfast, I promise to take whichever happens first to come into my mind at a certain moment, the idea of conduct involved is not suggestive. My action is conditioned by my promise; the presence only of one idea instead of another is conditioned by the previous history of the idea in my mind.

That frequency and last impression far more than other factors insure the presence of an idea in consciousness is a valuable piece of knowledge, and one which can be made use of in the processes that lead up to suggestion; but the only point in connexion with suggestion that is directly illustrated by these experiments is the existence of contrariant ideas. In the case of both repetition and coexistence the subject evidently detects the arrangement that is intended to impress him, and unconsciously deciding that he'll have none of it, clears his mind of the idea at once.

Dr. Sidis performed a further series of experiments on the elements that condition, or, as he would put it, that *suggest*, choice. Six squares (30×30 mm.) were placed on a white background. This with the squares upon it was again covered by a sheet of black cardboard. The subject was told to fix his attention on the black covering for five seconds. At the end of this period the black cover was removed and the subject had immediately to take one of the coloured squares, whichever he liked.

The following six factors in the suggestion of choice were studied :—

1. *Abnormal Position*.—One of the coloured squares was placed in an abnormal position.

2. *Coloured Cover*.—Instead of the usual black cover a coloured cover was used, the colour being that of one of the squares concealed.

3. *Strange Shape*.—One of the coloured squares was here of peculiar shape.

4. *Colour verbally suggested*.—Before the experiment one of the coloured squares was shown to the subject, who had to give it its precise name. If he did not succeed he was told the name of the colour. The square was then replaced and the experiment began.

5. *Place verbally suggested*.—As the cover was being removed the place of one of the coloured squares was suggested by calling out a number, as, for instance, "three," meaning the third place from the left hand.

6. *Environment*.—One of the six coloured squares was placed on a larger square of differently coloured paper.

If the subject selected the square that was forced upon him in one of these ways, this was called, according to Dr. Sidis's terminology, "immediate suggestion." If he chose the square on either side of the one intended this was considered to come under the heading "mediate suggestion."

After subtracting the number of choices due merely to chance, and combining the mediate and the immediate suggestions, the number of times that the forced square was selected is given in the following table:—

	Per cent.
Strange shape	56
Abnormal position	53
Environment	52.6
Coloured cover	43.9
Colour verbally suggested	33.3
Place verbally suggested	19.9

It is noticeable here that the first four arrangements are much more effective than the last two, and it is at once evident that the former represent indirect suggestions and the latter direct suggestions; while of the latter the last is far more direct than the preceding one. It looks, therefore, from these observations as if in the normal or waking state direct suggestion was far less effective than indirect suggestion.

Dr. Sidis points out that in the previous study with letters the same truth is indicated, since the factors of frequency and last impression that head the list are far more indirect than those of repetition and coexistence, and from these experiments he derives what he calls the law of normal suggestibility:—*Normal suggestibility varies as indirect suggestion and inversely as direct suggestion.*

We have described these observations at some length on account of their intrinsic interest. To the second group, however, the same criticism applies as to the first. We have throughout used the word "suggestion" because it is the term chosen by Dr. Sidis, but it is doubtful if the "lead" here given should be called suggestion except in the case of the last two arrangements.

The selecting of the card was carried out not because of the influence of the suggested idea, but because the subject knew that he was expected to choose one, and voluntarily agreed to do so. Here, again, the subject matter of choice being neutral, or indifferent to the subject's interests, the idea that possessed the energy given by contrast naturally determined the direction taken. But when we come to *place verbally suggested* we have a real suggestion, and in the waking state it is remarkable for its inefficiency. The experiment

really does show that direct suggestions which are obvious and which, therefore, arouse contrariant ideas are useless in the waking state, but Dr. Sidis fails to bring out the truth that the indirect suggestions given in this way are effective, not because of any positive suggestive quality that they may possess (though they might, of course, be given in such a way as to possess positive qualities), but solely because they satisfy the conditions of an energetic idea, and avoid the arousing of contrariant ideas. The legitimate inference from the experiments is that direct suggestion which arouses contrariant ideas is the very worst form of suggestion in the waking state, unless the presentation arouses so much emotion that the contrariant ideas are inhibited and rendered inoperative.

CHAPTER IV

OPERATIONS PRELIMINARY TO SUGGESTION

A SUGGESTIVE idea is one which exercises a disintegrating influence on the mind in such a way that critical and inhibitory ideas are rendered ineffective. It differs from a guiding idea derived from experience in that it has the power of determining the mind in a direction which is not the natural resolution of the ideas in consciousness, or of the dispositions which immediately condition these conscious ideas. The non-suggestive idea inhibits other ideas only in the sense that it ousts them from consciousness in order that for the time being the process of conation that is to the fore may be furthered, and initiates an associative system in which every direction of resolution is possible, which is therefore critical and which leads to knowledge. The suggestive idea, on the other hand, while it need not be independent of knowledge, leads straight to action or belief. Such ideas may be introduced from without by a person or a situation, and may at once exert their influence, or they may lie latent for a considerable period. In the latter case they will be brought to the front by the ordinary processes of association, and will

then exercise their peculiar inhibitory qualities ; here we have the phenomenon of auto-suggestion.¹

Before we consider the manner in which suggestive ideas should be introduced, if their peculiar properties are to be fully developed, some preliminaries claim our attention. It is, in the first place, desirable that such ideas, in addition to their special power of suggestion, should possess at least the qualities that condition the energy of ordinary non-suggestive ideas. These qualities, often confused with those which give a suggestive idea its peculiar significance for mental life, must be clearly distinguished from them. They give an idea its liveliness, they make it the starting-point of trains of association, and they insure the presence of a system of ideas that is easily affected by a suggestive idea when it makes its appearance. They can, therefore, never be neglected by the teacher who wishes to be suggestive, and this chapter will be devoted to considering them as the preliminaries of suggestion.

The liveliness and the energy of an idea, the extent to which it captures the attention and influences the rest of the mental content, depends upon several well-marked conditions.

1. It must be massive. A massive idea is one which is produced by the perception of a large object, as, for example, by the sight of a mountain or of a large river, or by the sound of thunder or of a large orchestra. Or it may be produced by the repetition of a mental experience over a long period of time. Ideas of this

¹ The term "auto-suggestion" is here employed because it is the one in common use. It is, however, misleading. The idea is really suggested from without, and appears to be "self-suggested" only to the person in whose mind it has been latent. "Pseudo-auto-suggestion" would be a more correct, though impossibly cumbrous term.

kind have a quality peculiar to themselves and take possession of the mind with great force, even though they may have no bearing upon its content or aims. They may, of course, be neglected. I may, for instance, refuse to listen to the thunder or the orchestra, and may concentrate my mind on something else. But if the direction of attention is neutral, massiveness is an important factor.

If subjects are introduced to the mind in minute snippets, if the dose is made homœopathically small, this quality is not to be found, and no matter how good the presentation may be, the feeling tone of the ideas will never be that of real experience. If we analyse any portion of our mental content, we shall find that this tone of massiveness attaches to the subjects that we have read over and over again because we liked them, that we have read slowly, lingering over episodes or details that pleased us because there was no need to hurry; we seem to have lived through the ideas rather than to have acquired them on stated occasions, and as a result they are heirlooms rather than purchases, old friends rather than travelling acquaintances. The lessons for the teacher are those of leisure and quantity. It may seem like irony to talk of leisure in these days of examinations and inspections; but examinations are not laws of nature, nor do they exist by divine right; and even when an examination is in the distance it is possible during some portion of the school year to give an appearance of leisure, while it is also possible to be uniformly hurried and worried when there is no examination demanding its tale of bricks at a given date.

The habit (fostered by examinations) of making boys get up with great accuracy one short portion of an

author tends more than anything else to prevent this feeling tone of massiveness. If I read one play of Shakespeare through with a thorough understanding of the plot, the characters, and the philological notes, I am, it is true, to some extent a gainer; but I lose the sense of intimacy with the author, the tone of "massiveness" for Shakespeare that a moderate familiarity with, say, one of the historical plays combined with a bowing acquaintanceship with all the others would have given me. To illustrate for examination purposes the debt of Vergil to Homer a few quotations and parallel passages are sufficient (they are probably given in the school edition); but to give the feeling tone of massiveness it may be necessary to read to the class in a translation (if they are but beginners in Greek) large portions of Homer, as well as to see that before they leave school they shall have read enough of Vergil to have acquired a grip of the whole story. The tone of the ancient history derived from reading the classic authors, or of the European history acquired through the medium of French and German writers, is essentially massive. The ideas have trickled in slowly, drop by drop, as chapter after chapter, with its linguistic difficulties, was mastered. Let any one compare his knowledge of Greek history derived from the reading of Herodotus and Thucydides with his knowledge of, say, Egyptian history derived from a manual. He may have a considerable acquaintance with the dynasties and the Shepherd kings, but the feeling tone will not be massive, and unless his reading has been the intensive and extensive study of the expert, he will not seem to have lived through the period.

In studies like geography the need of massiveness

makes itself especially felt. The distance between New York and San Francisco is easily measured on the map, it is still more easily learned by heart out of a manual, but the realisation of it with the proper feeling tone is a different matter. It can to some extent be given by reading aloud such a narrative as R. L. Stevenson's *Across the Plains*, and some other travellers' records that give the details of the long voyage with all its discomforts. This takes time, but the result is real knowledge, ideas with the qualities of experience instead of the sham knowledge that schools produce in such abundance. A couple of experiments may be sufficient to illustrate the logical side of a process in chemistry; a larger number worked by the pupils themselves must be provided if the "massive" feeling of having lived through the laborious discovery of truth is to be given.

2. It must stand in a certain opposition to other ideas. It is a general law of mind that if any mental process is suddenly interrupted, broken off, or blocked (excluding the cases in which a shifting of interest brings into prominence a new set of ideas), attention is at once directed to the point of interruption, and its psychic energy is thus heightened. If I am pursuing a train of thought and find it impossible to get beyond a certain point, the idea at which the development ceased attracts more attention than its predecessors. If the natural course of my ideas leads me to pursue a train of thought on a certain subject, the denial of my views by some one else makes me reconsider them carefully. If I am accustomed to hear a certain noise, say, a ticking clock, but normally pay no attention to it, the last tick gains a heightened energy when the clock stops. If I habitually derive enjoyment from the

possession of a certain object, the consciousness of the enjoyment becomes more vivid as soon as I am deprived of it.

Special instances of this are—(a) All cases of contrast. (b) Unusual occurrences including the sight of something that is familiar under strange conditions. (c) The case of first impressions, ideas derived from which often possess an energy which is remarkable. This indeed is a condition which frequently leads to suggestiveness.

The first two classes may be taken together. The teacher more than any other person who is engaged in placing ideas before an audience needs to avoid monotony and to insure the continual presence of contrast and of freshness. The actor, it is true, continually repeats the same part, but never twice to the same audience; the clergyman addresses the same listeners every week, but has considerable scope for variety in the subject-matter of his discourses; while the teacher with a very restricted syllabus for the term or for the year has to present the same facts over and over again to the same boys. Here is to be found the necessity for that best of all methods, the method of seeming to have none; the method that insures the greatest possible variety of presentation and continually presents old friends in new garments. History teaching affords a good illustration of this. The facts may be presented for the first time in the order of the text-book; at the first revision they may be given from the biographical standpoint; at the next from that of naval activity; and, finally, they may be treated in connexion with the political history of the period. Such a method needs much ingenuity and much toil, but it is justified by its results; for the energy of all the ideas presented

is largely increased owing to the ideas of contrast involved. Thrice happy is the master who can be methodical, in the sense of working out a systematised and logical scheme, and at the same time contrive to be ever fresh ; who can combine a little eccentricity with his daily routine. When he is inscrutable, when the class never know what he is going to do next, when they realise that in attacking new matter or revising old he will have some fresh device in reserve, and that they will have to be well on the alert to follow his moves, the principle of contrast is operating under the happiest conditions.

The third case, that of first impressions, is of great importance, as the energy of the resulting idea is often intense, and it frequently develops into an auto-suggestion. In this way arose Ranke's attitude towards history. "His course had been determined, in early life, by *Quentin Durward*. The shock of the discovery that Scott's Lewis the Eleventh was inconsistent with the original in Comynnes made him resolve that his object thenceforth would be above all things to follow, without swerving, and in stern subordination and surrender, the lead of his authorities. He decided effectually to repress the poet, the patriot, the religious or political partisan, to sustain no cause, to banish himself from his books, and to write nothing that would gratify his own feelings or disclose his private convictions."¹ It is in childhood and in youth that these impressions are most effective, as is well shown by episodes in the childhood of the late Frederick Myers and in the youth of J. J. Rousseau. "The first grief that I remember," writes Myers, "came from the sight of a dead mole which had

¹ Lord Acton, *Lectures on Modern History*, 1906, p. 19.

been crushed by a cart-wheel in the Borrowdale Road. Deeply moved, I hurried back to my mother and asked her whether the little mole had gone to heaven. Gently and lovingly, but without doubt, she told me that the little mole had no soul and would not live again. To this day I remember my rush of tears at the thought of that furry, innocent creature, crushed by a danger which I fancied it too blind to see, and losing all joy for ever by that unmerited stroke. The pity of it, the pity of it, and the first horror of a death without resurrection rose in my bursting heart.”¹ The other episode is recounted by Rousseau in his *Confessions*. On the road to Lyons he entered the house of a small proprietor and called for food. Only skim milk and barley bread were forthcoming, coupled with the assurance that there was nothing more in the house. By the end of the frugal meal, however, the peasant had taken Jean Jacques’s measure, saw that he was not a spy, and produced a ham, a bottle of wine, and an omelette, explaining that he would be a lost man and the prey of the tax-collector unless every one thought that he was dying of hunger. “All that he said to me on this subject, of which I was wholly ignorant,” says Rousseau, “made an impression that will never leave me. This was the germ of the inextinguishable loathing for the oppressors of the unfortunate working classes that has since filled my heart.”² In this case the energy of the ideas produced by the first impressions was so great that they developed into auto-suggestions and coloured the whole of Myers’s and Rousseau’s lives.

The responsibility of the teacher who introduces a

¹ F. Myers, *Fragments of Prose and Poetry*, p. 6.

² *Confessions*, Part I, Book iv.

new subject to his pupils is very great. Frequently it is upon the first presentation that the future attitude of a boy to the subject depends. His pride in beginning a new language like Latin is great, and if, as in Greek, there is a new alphabet to learn as well, this only makes the interest greater ; but often the pride and the interest do not last long. When the teaching is mediocre the Latin lesson and the Greek lesson soon become part of the daily routine, the meaningless grind that has to be got through in the intervals of athletic exercise. A little care will avoid this. A vivid introduction to the Latin people, an interesting exposition of its importance to civilisation in general and to that of the Anglo-Saxon race in particular, the treatment of the language in close connexion with the history and customs of the people who spoke it, the use from the beginning of an easy continuous narrative as reading material, and the restriction of grammar to what is essential for sound translating, may make the boy feel from the first that he has been introduced to a new sphere of thought, that he has, so to say, got hold of a big thing, and he will value his early classical teaching accordingly. Sometimes with susceptible minds and with favouring conditions these first presentations work out happily without any premeditation on the teacher's part. Another episode in Mr. Myers's life, his first introduction to Vergil, may be quoted.

“On my sixth birthday my father began to teach me Latin, and a few days later he gave me the first *Aeneid* of Vergil, with an interlineal translation. The scene is stamped upon my mind : the ante-room at the Parsonage, with its floor of bright matting and its glass door into the garden, through which the flooding sunlight

came while I pored over the new revelation with awe-struck joy :

Musa mihi causas memora quo numine laeso.

I remember the reverent emotion with which I hung on the rhythm of that majestic line. The invocation of the Muse came to me as absolutely real and new ; and the ' *quo numine laeso* ' suggested mysteries of divinity on which I dimly feared to dwell."

This is the kind of impression that can be made, but as a rule a skilful presentation is required to insure it.

When the teacher under whom the subject is commenced refuses to take his opportunity the damage is often irretrievable. Half-way up the school, a couple of years later, perhaps, the boy may come under a good teacher with an eye for essentials and an instinct for boyish interests, but it is too late. The subject has already been labelled and put away as dull and meaningless. The lesson, though freshly presented, seems to be the same old thing ; the master is assured that " we have done all this before." Any one who has taught a class of fifteen-year old boys, with a sprinkling of older stagers who have stuck fast, knows how hopeless is the task of convincing some of them that there is any reality in the subject that they are studying. Yet in the beginning this might have been done. If Mulcaster's advice were taken, and if the best and the highest-paid teachers were given to the lowest forms, it might always be done. As it is, the listless attitude towards literature, history, and language that is so baffling at a later stage can easily be accounted for. The value of first presentation has not been realised, and the ideas lack the energy that might have been derived from this source.

3. It must be expected or desired. If I have been looking forward to an event, say, to the return of a relative from abroad, the ideas produced by his home-coming are peculiarly energetic; so also if I have been hunting for an idea, of which I know the general characteristics that it must possess in order to fit into my scheme of thought, it brings with it when found a new stock of energy to the system which it completes and tends to dominate. How far can a pupil be made to expect or desire the ideas that are to be presented to him? To demand that he shall desire knowledge is perhaps to ask too much. We shall confine ourselves to expectation: if that can be produced, desire often follows.

Expectation arises naturally when the mind is working along a well-devised scheme. When I am reading a novel that is skilfully constructed, certain expectancies arise in my mind and help to fetter my attention. I expect that the hero, who is floating on a hen-coop in the middle of the Pacific Ocean, will be rescued by a passing ship, even though he has lost consciousness and is surrounded by sharks, and turn with a feeling of confidence to the next chapter to see how it came about. Were it not for this expectation, or if I thought it possible that he might not survive, I should probably skip the page, and turn on to see who, in fact, the real hero was, or how the story could get on without this personage. The ideas concerned with him would cease to have any energy for my mind. If, however, the story has been well written up to this point, I have a feeling of confidence that my natural expectation will be justified. In the same way, when I receive a letter addressed in a certain handwriting and bearing

a certain postmark, and recognise it as one which I receive periodically on business matters, I expect that the contents will be of a certain kind, though I may prove to be mistaken as to the details, and again, owing to my confident expectancy, the idea of the letter and its import are energetic. When a discord appears in a musical composition, I expect to find it resolved in the next bar, and attentively await the completion of this phase of thought.

In school work it is necessary that this feeling of confident expectation should exist. In spite of the apparent eccentricities of method alluded to in the last section, in spite of the apparent want of sequence, of the reversal of the order of the day, the pupil should feel that each portion of the work on which he is engaged is the natural preliminary to something which is to follow, and leads surely to a further stage that would be unintelligible without it. If there is a preperception of what is to follow, so much the better, but if there is none, the certainty that the school work is not split up into disconnected tracts, but is an organic whole in which each part is the natural complement of the other, will suffice. This certainty is a function not of the presentation at the moment, but of the total organisation of school studies. When the geography of Europe in one school hour is followed by the reading of *Cæsar's Gallic War* in another, the pupil should expect to find that the first throws light on the second; when he is learning one branch of mathematics, he should expect to find that it stands in a close relation to the other branches that are taught him; when in classics or in English he is asked to acquire a certain technique of syntax or composition, or a certain method of comparison

and inference, he should take it for granted that these things are not ends in themselves, but that they pave the way for something that is to follow; that though their meaning may not be wholly clear, they will help to make clearer what is yet to come; he should, in short, expect to find a rational sequel to everything that he does or learns. This confidence is for the learner what belief in the uniformity of Nature is for the man of science.

4. It must convey a meaning. This is implied by the subject-matter of the last section, but the meaning there intended is of a restricted nature. It may be purely schematic, and have no connexion with any of the deeper meanings that sway human tendencies. Neither is the meaning that is supplied by apperception in the sense of the new ideas being grasped and understood by a suitable mental content here sufficient. With adult nature the meaning that the greater part of our experiences has for us is closely connected with their utilitarian properties. In passing a judgment on any of the conditions that affect our daily lives, we ask the question, "Of what use is it?" The meaning of the term "use" depends on our aims and on our interests, but knowledge that has no issue, processes that do not in some way forward the attainment of ideals, are tacitly put on one side, except in some cases of mental perversion.

The older theory of a liberal education based itself on the exclusion of utility in any sense of the word, and is well expressed by Newman in his *Idea of a University*. "That alone is liberal knowledge which stands on its own pretensions, which is independent of sequel, expects no complement, refuses to be informed

(as it is called) by any end, or absorbed by any art, in order to present itself duly to our contemplation. The most ordinary pursuits have this specific character if they are self-sufficient and complete; the highest lose it when they minister to something beyond them.”¹

This view interpreted in practice resolved itself into the teaching of grammar and syntax for their formal value, and is thus identified with the somewhat obsolete doctrine of formal training; while considered theoretically it failed effectively to separate the æsthetic from the more logical elements involved in a literary training. It is probably true only of a certain kind of æsthetic perception that it carries the mind on to nothing beyond itself, and demands no issue or complement. When I am absorbed in the sight of a majestic cathedral or of a great pictorial masterpiece, my mental content is self-contained and static. The experience satisfies my æsthetic needs for the time being, and no further meaning or issue is asked for. This is a desirable experience, and one that may deepen and enlarge personality, but it is only one of many elements in experience, and does not even cover the whole field of æsthetic. In its pure state it is to be found in the contemplation of single examples of plastic art; in literary or in musical compositions it is mingled with the expectation that each stage of presentation shall develop into the next, and the belief that every fragment has its use and its meaning within the whole structure. Modern tendencies in philosophy as found in the new school of Humanism are helping to make the issue clearer. “It is probably,” says Dr. Schiller, “by this senseless policy of insisting (falsely) on the uselessness of

¹ J. H. Newman, *The Idea of a University*, Discourse V.

knowledge in order to arouse intellectual interests in the young, that these same sages have fostered the 'deficient interest in the things of the mind' which they are wont to deplore. Human indolence does indeed naturally shrink from the labour of learning, but there would probably be far less ground for complaint if the victims of their intellectual prejudices were allowed to learn how knowledge is the most useful and salutary of all things, and shown the uses even of the staple methods. Nay, if the pedagogical value of interest were more extensively exploited, even the optimistic dictum of Aristotle, that 'all men by nature desire knowledge,' might cease to seem a pathetic paradox. Such a policy, moreover, would afford far less nutrition to the 'sordid utilitarianism' which it is so customary and so hypocritical to denounce, than the working of our actual institutions. For inasmuch as it is not considered legitimate to lay stress on the intrinsic usefulness of knowledge, on the value of language as our means of communicating with each other, on the value of science as our means of controlling the world, on the value of philosophy as our means of controlling ourselves, extraneous motives of a far baser kind have to be supplied to arouse the interest which sets in motion the wheels of our educational machinery. All the talk about the nobility of a disinterested pursuit of learning is almost wholly cant. In point of fact 'liberal education' in England at the present day rests, not on the legendary 'love of knowledge for its own sake,' but on the twin pillars of Commercialism and Competition, buttressed, perhaps, in some few cases by the additional support of snobbishness. These two major motives have been combined in the crafty device of 'scholarships' awarded on the results of competitive

examination, and their operation on the minds alike of parents and of children is practically irresistible.”¹

It is indeed mere cant to expect the minds of children to work from motives that do not appeal to an adult, and therefore stress must be laid on the meaning of every idea that the school provides. Our pupils must realise that in history, whether of the classical period or of mediæval and modern Europe, they are learning about the origins of their own social surroundings, and that without this knowledge a sound judgment on the matters that most concern a citizen is impossible; they must realise that language, in addition to being a means of communication, enables them to understand the character of the nation that uses it; that literature is read to give an insight into the deeper and more subtle elements of mental and spiritual life, and that a properly diffused understanding of these is essential for social welfare; that science, in addition to its purely theoretic interest, has revolutionised the means of communication and transport, the diffusion of luxury and of learning, the advance of hygiene and longevity; that mathematics is the basis of physical science, and that the discoveries most useful to mankind have often originated in pursuits whose motive was scientific curiosity only; in every portion of the curriculum the boy must be taught to see a bearing on his future activity in the world, and in this way the reality of life as a whole will be impressed upon him, and the energy of his ideas will be maintained.

5. It must bring with it pleasure or pain. Other things being equal, an idea that is accompanied by noticeably pleasurable or painful feelings is more likely to possess energy and to attract attention than one

¹ F. C. Schiller, M.A., D.Sc., *Studies in Humanism*, 1907, p. 23.

which is neutral in this respect ; while for the energy to be continued or developing, the affective state must be pleasurable rather than painful. It is true that the memory of a painful experience may possess a durable energy, but its nature is inhibitory rather than developing.

This position is too commonplace to need development except in its particular application to the adolescent mind. Boys have not got the self-control of adults, neither have they the well-stored minds for which new ideas easily become interesting ; yet it is a mistake to suppose that on that account the interest must be supplied by the teacher if a pleasure-tone is to accompany the learning. A healthy boy is brimming over with energy, and it is possible that passive interest, especially if it is of long duration, appeals more to an adult than it does to him. Boys like to be managed ; they like to be given difficult tasks to perform, they like to have problems to solve, they do not in the least object if they are even driven to do a piece of work so long as two conditions are forthcoming : (*a*) It must involve a process of reasoning which they can just compass if they really exert themselves ; (*b*) It must reach a definite conclusion at the end of the sitting, and the boy must realise pretty distinctly what he has got through and completed.

Given these conditions, the harder the work is and the greater the activity involved, the keener will be the pleasure-tone for the average healthy boy. Soft options do not really please schoolboys, and they certainly form the worst possible preparation for suggestion.

In discussing these preliminaries we have often been near the boundary-wall of suggestion ; we have treated

the conditions of interest, and interest is often able to lead to suggestive teaching, though it is not synonymous with it. It is now time to cross the boundary, and consider in what the essential factors of suggestion consist.

CHAPTER V

THE PROCESS OF SUGGESTION

THE conditions treated in the last chapter are those on which depend the energy of ordinary ideas, their capacity to attract attention, to initiate trains of association, and to form centre points for idea systems. A suggestive idea must possess energy; it has indeed more energy than any other idea. These conditions, therefore, apply to it as well as to other ideas. Further, for a suggestive idea to be effective it must find as material to work upon groups of ideas that have arisen under these conditions. In all preliminary work, therefore, they must be strictly observed if suggestions are to produce their full result. Live teaching depends on this, and lifeless teaching can never lead to suggestion.

But the suggested idea, with the peculiar energy which characterises it, arises under certain definite conditions of its own.

I. It must be introduced by a person who is trusted, loved, or feared; or under circumstances that inspire these sentiments; or in a tone of voice or with a manner that the subject has always associated with ideas that are to be acted on or believed. One or other of these qualities, or more often a combination of them, is an invariable characteristic of the person who is

suggestive. In other words, a suggestive person may be one who can set up in another a state of emotion sufficient to produce an unstable and easily dissociated condition of mind, and thus to inhibit the rise or the development of contrariant systems.

2. It must be introduced so that reaction is not set up. It is characteristic of the general law of interruption already mentioned that the point blocked in a train of thought has attention drawn to it, but the ideas on both sides of the blocked point are equally illuminated; the idea of not paying my bills, and the reasons why I should not do so, are realised as vividly as the idea that I ought to settle them at once, the development of which they tend to arrest. A suggestive idea, however, must possess more energy than the ideas with which it is competing; an idea, therefore, that initiates a strong critical reaction will not be suggestive.

Reaction can be set up in two ways. (a) When an idea is presented to me that is wholly incompatible with my mental content, my sentiments, and my aims, it is immediately rejected. If I am bent on making a fortune on the Stock Exchange, a suggestion that I shall enter the Church will not be favourably received, similarly, when I am engaged in writing a theological treatise the jargon of the stockbroker will fall on deaf ears. If the reaction is sufficiently strong and immediate it does not reach the critical stage; it is when the state of mind is sufficiently neutral for the new idea to obtain a slight footing that the critical reaction of ideas that are summoned up from the subconsciousness begins. It must be borne in mind that the understanding of an idea or of a position does not make me any the more inclined to act upon it; apperceived ideas are not

necessarily suggestive. The theologian may have a very clear conception of the advantages to be gained by making a successful *coup* on the Stock Exchange; but he prefers to act otherwise.

(b) If the idea, though not very antagonistic or possibly neutral, is introduced in too great a quantity or too persistently, this may defeat its ends. In all mental process that is not guided by a strong element of conation, reaction is sooner or later certain to occur, and this all the more surely if the ideas involved have a strong feeling-tone. Association by contrast, or the passing from one idea to its opposite, is for ideas viewed on their cognitive side a questionable law, but it is certain that feelings readily pass over into their opposites, and to this truth no doubt is due the original acceptance of "contrast" as a primary law of association. The nervous centres which are excited by feelings of elation easily become fatigued, and the succeeding state is one of mental depression. With an emotional person love is often succeeded by hate, joy by grief, confidence by distrust. The changes of fashion in clothes and in social observances afford abundant illustration. It is always possible that the feeling-tone of an idea may by reaction tend to inhibit the idea that gave it birth. When, for example, it is first suggested to me by a circular that I should purchase Jenkins's soap or hair-restorer, my state of mind is indifferent. I may need soap or hair-restorer, and the advertisement sways me slightly in the direction of these particular articles. If after an interval, during which the idea is absent from my mind, I occasionally hear praise of these commodities, or learn that my old friend So-and-so is using both with good results, the tendency to buy may grow stronger and

stronger. If, on the other hand, the first circular is immediately followed by a second, and the second by a third ; if I am unable to take up the newspaper without seeing the advertisement ; if I cannot raise my eyes without finding it on a poster, a feeling of reaction arises and develops within me, until, finally, I make up my mind that were there no alternative I would willingly go bald and unwashed rather than patronise Jenkins's specifics.

The too direct or persistent introduction of an idea may thus result in a reaction against it and in the complete destruction of its suggestive energy. Or the reaction may be of a more general kind. Boredom and listlessness may set in, or a moody state of antagonism that will attach itself indifferently to the particular set of ideas that gave rise to it, or to any ideas that are unfamiliar, or to the person or situation that introduced them.

This may be avoided by bringing forward the idea very gradually. If possible it should be introduced so that its very insufficiency makes the mind ask for more. The most suggestive teacher is he who makes his pupils feel that he is keeping back from them something of value that they can have if they ask for it and are worthy of it. The suggestive book is often one that just glances at a certain topic, then deals with other matters, and then returns skilfully to it again. The suggestive idea may thus derive some of its energy from being introduced marginally, and in this respect is unlike the ordinary idea whose energy depends on its filling the centre of consciousness.

Reaction, while not necessarily contrariance, affords the conditions under which contrariance arises, and it must therefore be (*a*) repressed, or (*b*) avoided.

(a) The suggestive person does not always prevent the contrariant idea from coming into consciousness, but he inhibits it at an early stage by the emotional tone which he induces. The mind is first conscious of the feeling of antagonism, and then of its gradual subsidence. Such an emotional tone produced by a good speaker or teacher gives rise in the pupil to an unstable condition of mind which is, therefore, easily dissociated and influenced by suggestion. The drawback of this state of mind is that it is weaker than a more unified condition, and is liable to be influenced by every suggestion. It cannot always be relied on. One teacher may dissociate it and influence it in a certain way at one time, and may flatter himself that he has produced a permanent disposition. But the pupil escapes from his influence, is dissociated by the society of some companion, and finally succumbs to a different suggestion. Much suggestion of this kind could scarcely strengthen the mind. It is a process that can be justified only when it takes place seldom, when the mind is at a certain stage of growth, and for the sake of introducing ideas of a specific kind which will, from their intrinsic value, tend to concentration, and thus will counterbalance the dissociation which preceded their introduction. It is, moreover, not a bow for every man to shoot with, since, if it is not absolutely successful, it is a complete failure. There is no middle way.

(b) Thus, while it is certain that suggestion can often be carried out in this direct manner, it is not so certain that the process is a desirable one. Fortunately there is a method that does not involve these drawbacks. It has already been shown that new ideas can be introduced so discreetly that no reaction is aroused, that sleeping

dogs can be let lie, and the subject remain sublimely unconscious that he is being "got at." The indirectness is increased when dissociation takes place under the influence of a strong conative process, when the mind by sheer concentration on a certain system of ideas ousts and inhibits other systems, including those of criticism and contrariance. If when striving with all the energy of which I am capable to bring to completion an important piece of work I am daily brought into contact with a man for whose religion, nationality, or manners I have a profound dislike, this feeling of antipathy may be dissociated and prevented from coming to the front by my concentration on the matter in hand. While I am planning out methods of getting round obstacles, of doing good work with bad tools, and of keeping sulky workmen in a good humour, it is possible that my colleague, on repeated occasions, may have shown me a side of his religious views or of his national characteristics that I did not suspect before. In ordinary circumstances any tendency to approve would at once be held in check by my fixed antipathy; but my set purpose gives my mind no leisure to dwell upon this antipathy, the new ideas fall on neutral ground, and by the end of our collaboration may themselves have become strong enough to inhibit my old tendency to reaction.

Stated schematically: if an idea A be introduced in company with a conative series of ideas X, Y, Z, of which it does not form an essential element, though it may stand in some relation to it, the concentration of the mind on X, Y, Z will render impotent the system that might criticise and inhibit A, and A thus obtains a suggestive value.

In such a state of mind the feeling tone is that

strenuous one which accompanies all effort, and the idea suggested in connexion with it will, even as a latent disposition, possess that feeling tone which tends to conation and therefore to unification of mind. It will silently take its place and dimly be realised as an idea which has an active value, it will tend to come to the fore again when any process of conation that involves it is at work, and when brought to the front by the ordinary processes of association, it will by its very tone tend to induce conation and the unity in diversity that is characteristic of the sane mind. This gives the ideas introduced by the indirect an immense advantage over those introduced by the direct method.

In the latter case the ideas introduced when the mind is dissociated through emotion and is in a purely passive state will, it is true, have a suggestive value for the moment, and in some cases may possibly have a permanent value; but their feeling tone will be one of sentiment, and they will not be so certain to link themselves naturally to states of strenuous effort or to draw them into operation in the future.

There is yet another advantage inherent in the indirect method. If the new idea can be introduced almost unnoticed so as to lie latent for a period and then to assert itself, there is every chance that the pupil will look upon it as originating with himself. In this case he is little likely to bring contrariant ideas to the front, as they will be inhibited by his own feeling of self-esteem. When auto-suggestion of this kind can be secured, it is probably the most effective form of suggestion that there is.

In direct suggestion, on the other hand, the process of communication has been as follows:—The subject has

been aware of contrariant ideas in his mind, and has also been conscious of a desire on the part of the speaker to counteract them. The effort of the speaker has been successful through the emotional tone produced, but if the subject is candid with himself, he can be under no delusion as to the origin of the ideas which he feels to be operative in his mind. In other words, such ideas are far less likely to be received as auto-suggestions, and are far nearer the danger of diminishing the subject's belief in his own personality (though here a proviso must once more be made in favour of the intrinsic virility of certain ideas), than are the ideas which are introduced indirectly, in connexion with effort, and without consciousness on the part of the subject that his views are being modified.

There is yet another condition that furthers the suggestiveness of an idea. This is the suddenness with which it is presented. If when sitting in a drawing-room I say to an acquaintance suddenly, "There is a rat crawling up your leg!" his mind will at once be filled with the notion rat-leg to the exclusion of everything else, and he will immediately jump up, or at least look down, to see the supposed rat. His attitude of mind will not be, "I shall look down at my leg to see if what Jones says is true"; he has not time to consider the matter; the idea through its very suddenness overflows into action at once before critical ideas are able to arise. In addition, the idea, a repellent one, by its suddenness gives a shock to the mental system and tends to render dissociation easy. In this case, therefore, the conditions are (1) rapidity of presentation, which does not give the contrariant ideas time to arise, combined with (2) the shock of presentation, which helps

to hinder them from making a protest. If, on the other hand, I say to my friend slowly, "Are you aware that there is a rat crawling up your leg?" his mind has plenty of time to tackle the statement. Critical ideas immediately point out to him (*a*) that it is extremely unlikely that there should be a rat in the drawing-room; (*b*) that a rat is not a small object, and that he does not feel it; (*c*) that if a rat were really there, my tone of address and my manner would be more agitated. As a result of this deliberation, instead of jumping up or looking down at his leg, he either takes no notice, or expresses his disbelief in well-chosen terms.

The conditions of rapidity and of surprise are often to be found in the "first impressions" mentioned in the last chapter. A new idea, presented to a mind which is unprepared for it, by virtue of the slight shock that it administers, develops a high degree of energy if it is sufficiently vivid, and either immediately or later on, after a period of existence as a latent idea, becomes suggestive and dominating.

The personal qualities that tend to give suggestive force and to inspire confidence when dealing with adolescents must now be considered. They are necessary for indirect no less than for direct suggestion, though in the former their operation is not so immediate. Their possession is essential to the teacher in his relations with younger and with older boys, though with small children who are not very critical, and can be imposed upon with comparative ease, they may be simulated with good effect. With boys who are past the age of puberty, who are critical with that severity which marks

the immature mind, and who habitually discuss their masters, a superficial vincer is easily detected.

1. The first of these qualities is self-control and reserve. Unless a man can first control his own ideas and impulses, he will be unable to influence those of others. Signs of weakness or self-indulgence of any kind are easily discerned by the thirty pairs of eyes that daily scrutinise a master's movements. This self-control must extend to his personal relations with his pupils. It is not good that a master should be too familiar with his class. They should feel that he is a friend, but should not forget that he is a superior. A constant attitude of reserve will give great weight to his views and sentiments when he discloses them.

2. Closely connected with reserve is the quality of inscrutability. A master about whom boys are never able to make up their minds, who remains always to some extent a sealed book to them, will keep them on their mettle and in an impressionable state by the slight element of uncertainty involved

3. Inscrutability is often to be found in close relation with the quality of masterfulness, to the composition of which a variety of causes may contribute. For the modern schoolboy, as for the Hebrews whom Solomon had in mind, fear is the beginning of wisdom, and the affection that is based upon a wholesome awe is that which the master should seek to inspire.

4. No device of teaching or of manner, no reserve of information or of sympathy, will promote suggestion unless the idea that is to be suggested is first vividly imagined and keenly felt by the teacher. It is, of course, possible for an unimaginative and unsympathetic man to introduce a boy to an inspiring book ; but it takes a

very suggestive and a very interesting book to withstand the chilling dreariness of a dull teacher. Imagination and feeling are both contagious. This contagion makes itself felt through manner and play of features, but most of all through good verbal expression. It is, therefore, above all things necessary that a teacher should speak well. He may address his class in narrative form very seldom, but when he does so for the sake of conveying any impression, care should be taken that the exposition is really good. His manner and mode of speech may, perhaps should, be easy and colloquial in the ordinary course of nature, but when he reads a piece of literature to his class, the performance should be an artistic one. It is useless for him to feel the idea that he wishes to convey unless he is able to express it; while unless the idea be there, the power of expression is of no avail. Both are needed in combination, and both must be assiduously cultivated. The following description refers to a university professor, but school no less than university teaching needs just such a fusion of conviction and of utterance:—
“There was a magnetic quality in the tones of his voice,” writes a hearer of Lord Acton, “and a light in his eye, that compelled obedience from the mind. Never before had a young man come into the presence of such intensity of conviction as was shown by every word Lord Acton spoke. It took possession of the whole being, and seemed to enfold it in its own burning flame. And the fires below on which it fed were, at least for those present, immeasurable. More than all else, it was perhaps this conviction that gave to Lord Acton’s Lectures their amazing force and vivacity. He pronounced each sentence as if he were feeling it,

poising it lightly, and uttering it with measured deliberation. His feeling passed to the audience, which sat enthralled. It was in truth an emotional performance of the highest order—a wonderful work of art such as, in all likelihood, will never again be witnessed.”¹

5. After a description of Lord Acton’s eloquence, the statement that the teacher must possess both sufficient knowledge of his subject and sufficient general culture sounds absurdly commonplace. Life, however, largely consists of the commonplace, and education is not a collection of purple patches. The able teacher supplies the silver threads that bind together the fustian tissue, and one of these threads is the efficiency that comes from knowledge. Of this among the teachers of higher forms there is usually no great lack, but the present economic conditions of education, and the tradition that the staff of a school consists of a headmaster and of ushers, a tradition that in England we are very slow to shake off, give us a copious supply of ignorance among the teachers of smaller boys; while the ludicrously excessive hours of work, again a traditional survival, deprive the larger number of assistant masters both of the energy and the leisure for adding to what knowledge they possess.

And yet for the teaching of most English subjects or of the classics to junior forms, a very considerable background of knowledge is required, and this knowledge, if present, soon makes itself felt and wins the respect of a class. Boys appreciate knowledge in a teacher more than is generally recognised; indeed, if once they take it into their heads that he is exceptionally well informed,

¹ Quoted in the Introduction to Lord Acton’s *Lectures on Modern History*, 1906, p. xi.

they are quite ready to have an exaggerated notion of his ability, and under these conditions listen with respect to what he has to say. They are also insensibly affected by his acquaintance with men and things, and for this reason it is to be regretted that schoolmasters do not occasionally pursue some other calling that brings them more into contact with their fellow-men before they finally devote themselves to teaching as a career.

6. It need scarcely be added, however, that all the erudition in the world will be useless unless the other qualities of a teacher are there, and in particular, the general technique that for want of a better name may be called business-like habits in the class-room. The performance of routine work in a quiet professional manner is not showy; punctuality of appearance, regularity with lists of marks, rigidity in setting and demanding impositions, definiteness in the demand for home work—these things are but the drab-coloured background of efficiency. If absent they are missed; if present they are taken for granted; but none the less they work in with the other elements which command respect, and it may be doubted if a teacher who neglects them will in the long run be suggestive, no matter what his gifts may be.

7. It remains to mention one personal characteristic on which great stress is often laid, namely, athletic qualifications. A teacher should, no doubt, be able to interest himself in the pursuits of his pupils; but the athletic habit of mind is no substitute for any of the above-mentioned qualities. It does not necessarily imply self-control or even business-like habits, and if it be accompanied by a lack of interest in ideas, the authority that it gives may be far too dearly purchased.

Is it to be supposed that these qualities are to be found in all suggestive teachers, or that the lack of them renders suggestion impossible? Probably not. No foot-rule has yet been discovered that will measure the things of mind with absolute certainty, no analysis that does not involve a cross-division or allow some element to escape through its meshes; but for ordinary mortals these are the permanent conditions. Let the exceptional man, the born teacher, of whom we hear so much and see so little, remember that his gifts bring with them responsibility as well as freedom.

CHAPTER VI

SUGGESTION AND IMITATION

IF an action is suggested by one person, it may be imitated by another, and the words "suggestion" and "imitation" are often used as if they were correlative. This use is a loose one. "Imitation" is a term generally applied to movements. I imitate some one's manner of walking, or of eating, or his habits of speech, or of facial expression. I do not talk of imitating his feelings or his wishes. Here the term "sympathy" seems more appropriate. For general purposes, however, the meaning of imitation may be extended to a community of ideas and wishes, and in this case it is possible to say that imitation and suggestion appear to be the same process viewed from the standpoint of the active and the passive agent respectively.

This correlation of terms, though habitual and useful, needs modification in detail. As we rise from instinctive to conscious processes imitation goes through several distinct stages. It is customary to distinguish between (1) the instinctive stage. Here the agent is wholly unconscious that he is imitating. I rush into a hat-shop and select a certain hat from among a number that are shown me, and am quite unaware that my selection is influenced by the style of hats worn by my friends, or

that the hat has been forced upon me by a skilful salesman, in which latter case my choice has been imitative in the wider sense of the word.

(2) The conscious stage. Here it seems natural to do what those like us are doing, and though we have a full consciousness of our action, very little attention is given to it. When I buy a hat of a certain kind because I see that my friends have similar hats, I am fully aware that in doing so I resemble them; but I do not necessarily act thus in order that I may resemble them. Out of this state of mind there easily develops (3) the purposive stage. I actually desire to imitate.

This desire may be actuated by one of three motives. (a) For the sake of imitation itself. I wish to have a hat like Jones's that I may not appear unusual. (b) For practical ends. I want a hat like Jones's because it appears to be a very serviceable one. (c) For reasons of self-esteem. If the process of imitation has been difficult, or if I may dread its impossibility, a feeling of emulation arises. I want to get a hat like Jones's that I may not seem to be left behind in the race for hats; and this leads to a desire not merely to imitate Jones, but actually to outdo him. When women are selecting hats this element of emulation is prominent; imitation has led to competition.

How far is it legitimate to use the term "suggestion" as the correlative of all three stages of imitation?

At the lowest stage unconscious imitation is very like the correlative of indirect suggestion; but this likeness is only partial. For in indirect suggestion the boy's unconsciousness is not of the idea that is thus presented to him, but rather of the thought that his teacher wishes him to adopt it. Stages two and three in the same way

are to some extent the counterparts of direct suggestion, in so far as the agent feels a desire to act in a certain way, and realises to some extent whence it arises. But if suggestion be considered in connexion with the influence of adults upon adolescents, it will be evident that the correlation is not absolute. For imitation takes place essentially among beings who resemble one another.

If I see a number of people streaming through a gate, I feel a natural tendency to follow, and the more the individuals of which the crowd is composed resemble me, the greater is this tendency. Unconsciously I infer that what interests people whose mental constitution is like my own, will also interest me. In the same way, I experience a tendency to wear the same hats as my fellow-countrymen, and in particular, as those whose conditions of life and whose incomes are similar to my own; but I have not the least wish to adopt a Chinese or Mexican head-gear. Similarly, a number of sheep will follow one another into a field, but will not follow horses, cows, or men. Imitation is between similars rather than between dissimilars.

You find

In this the pleasant pasture of our life
Much you may eat without the least offence,
Much you don't eat because your maw objects,
Much you would eat but that your fellow-flock
Open great eyes at you and even butt,
And thereupon, you like your mates so well,
You cannot please yourself, offending them.¹

It must be confessed that the teacher is different from the boys whom he teaches. Upon the common basis of

¹ R. Browning, "Bishop Blougram's Apology."

humanity have been superimposed too many different layers of interests and tastes for the resemblance to be very great. Imitation will therefore be restricted in its operation. It may be objected that inferior beings often imitate those who are superior to them; that the manners and customs of conquerors become fashionable and set the tone for the conquered. But the analogy is not a complete one. The members of a conquered nation are slow to confess that the conqueror is really superior to themselves, and are always ready to attribute his victory to chance or to circumstances that have no connexion with their own bodily or mental inferiority. While, therefore, their imitation of him is partially due to his social superiority, it is equally, if not to a greater extent, due to their belief that they are imitating equals.

Between the schoolmaster and his pupils the relations are different. If he is too familiar with them, and is by nature an inferior man, the boys, far from considering that relations of equality exist between him and them, rapidly class him as being a person who is worthy of no consideration, and who certainly ought not to be imitated. If he is a sturdy and able personage, the feeling of affection that his pupils have for him is largely tinged with fear, and we are not always inclined to imitate those of whom we are afraid. It is not denied that boys are to a great extent affected by a master's habits and mode of thought, but the imitation is instinctive; the boy does not deliberately determine to imitate. He may by suggestion and teaching be induced consciously to act in a given manner, but this suggestion is not the correlative of imitation.

Still less does the relationship of instinctive imitation that exists between the master and the boy lead to

emulation. The gulf between them is too great. We emulate not those who are greatly our superiors, but those who are only slightly in advance of us—whose superiority may, we think, be apparent rather than real, and may be disproved by a little effort on our part. Neither in the class-room nor elsewhere do boys imitate masters with that imitation which leads to emulation.

M. Tarde, in an interesting passage,¹ states that (1) the imitation of ideas precedes that of their expression; (2) the imitation of ends precedes that of means. In proof of his assertion he points out that Spanish literature had already been imposed on France with the Spanish power before fashions in dress in the sixteenth century came to France from Spain; that in the seventeenth century French literature had already reigned in Europe before French art and dress followed; that the Italians of the Renaissance, when they imitated the Græco-Roman civilisation, did not begin by reflecting its externals in statues, in frescoes, and in Ciceronian periods, finally to be penetrated by its spirit, but that their model began by affecting their heart. That imitation, in short, begins with what is internal and essential, and proceeds to the external.²

It is difficult to accept either of these statements without modification. The first may represent one order of sequence in the development of social imitation between nations; but as between individuals who are in close contact with one another, the internal, the guiding idea or aim, first makes itself felt through its external expression, and for educational purposes M. Tarde's order must be reversed. If it is desired to produce a

¹ G. Tarde, *Les Lois de l'Imitation*, 1895, p. 225.

² *Ibid.* p. 217.

sentiment in a pupil, the attempt to make him accept it or imitate it directly will in most cases be fruitless. One method, as already stated, is to introduce it to him gradually, and this largely through imitation of the processes in which it has been expressed. For instance, though this example must not be taken as expressing any undue preference for linguistic instruction of a certain kind, when a pupil translates from another language into his own the words and phrases in which a thought has been crystallised, by making the form of expression his own he is forced to place himself in the mental attitude of the writer; the adoption of the form of expression brings with it to some extent the sentiment which produced the expression; and when once the sentiment is there it is a comparatively easy matter to intellectualise it, and to emphasise the idea in connexion with which it originally came into existence.

The second statement is more in accordance with fact, although its truth largely depends on the grade of imitation. I may unconsciously and instinctively imitate means to an end which I do not realise, though they will have no import for my mind. I may imitate them consciously, because I admire the person in whom I see them embodied, though the end to which his actions are tending is unknown or indifferent to me. But, if I adopt the end at which I see a person to be aiming, my imitation has reached the stage of consciousness where a full realisation of the end and of its meaning for the general purposes of my existence is present. For educational purposes it is often impossible to begin here. It is necessary rather that the pupil shall be induced by suggestion to accept the earlier stages in a progressive series of ideas long before the

true meaning of the progress dawns upon him, as it does at last when he reaches the end which illumines the pathway that he has traversed.

The imitator thus plays the sedulous ape to the expression of ideas and feelings which he is frequently not in a position to understand. In the case of the schoolboy the society in which he lives is an ideal one for the propagation of such imitation. It represents, indeed, the essentials of society according to M. Tarde. Society is not primarily an economic combination in which masters and servants, workers and exploiters exist side by side, and in which the division of labour, the differentiation of professions, and the inequality of incomes produce a caste system. "It is rather a mutual determination of claims and acknowledgments of rights and duties than a system of mutual assistance. This is why it exists among beings either similar to or little different one from the other. . . . If beings that are very different from one another can collaborate at some common work . . . it is because they have a common basis of ideas and traditions, a common language or translator, all narrow likenesses formed by education, which is one of the forms of imitative transmission. . . . One is, I repeat, in far closer relations with those whom one most resembles by identity of calling or education, even if they are rivals, than with those of whom one has the greatest need."¹

In the artificial society of the school as nowhere else these conditions are found in their purity. The boys are largely on the same plane of interests and ideas, and there are no economic divisions. If imitation is of similars by similars, and if emulation is of those who

¹ G. Tarde, *op. cit.* pp. 66, 67, 70.

are superior, but separated by no great gulf of ability or of income, they should exist in schools as nowhere else.

In school education there are thus two distinct factors : the influence of the master upon his pupils working through suggestion and imitation, and the influence of the pupils on one another working through imitation and emulation. Every word that the master speaks is spoken, not to one boy, but to a number, and its suggestive force will be intensified by the link of imitation among similars ; every process that he initiates will be developed under the influence both of imitation and of emulation.

The contagion of ideas is well, if somewhat fancifully, brought out by Espinas in his work *Des Sociétés Animales*. He points out that the buzzing of one wasp in anger induces the other wasps first to buzz in unison, and then to evolve the feeling of anger that originated the first buzz. He continues :—

“ I add that this anger will increase with their number. The effect of number on living creatures is very curious. We now know that man in isolation neither feels nor thinks like the same man transported into the middle of a crowd, and there is an observation often made by a celebrated critic that at the theatre the presence of the spectators alone makes them quite different from what they would have been separately. Let us examine what takes place in an audience to whom an orator is speaking. I suppose that the emotion felt by him may be represented by the figure 10, and that by his first words, at the very commencement of his eloquence, he communicates at least half of it to his hearers, who are, say, 300 in number. Each one will react by applause or

by a redoubling of attention; there will be in the attitude of each a certain tension, and the combination of these attitudes suddenly assumed will produce what the newspapers call a 'sensation.' But this movement will be felt by all at once, for the listener is quite as much taken up with the audience as with the orator, and his imagination is suddenly assailed by the sight of these 300 persons struck with emotion—a sight which cannot fail to produce in him a real emotion according to the law just enunciated. Let us admit that he feels only the half of this emotion, and let us consider the result. The shock felt by him will be represented no longer by 5, but by half 5 multiplied by 300, that is to say, by 750. If the same law is applied to the man who is standing up and speaking in the middle of this silent assembly, it is not the figure 750 that will represent his internal agitation, but 300 times $\frac{7.50}{2}$, since he is the focus to which all this crowd profoundly moved sends back the impressions that he communicates to them. This is why so many orators who are as yet inexperienced are struck silent after their first vivid sentence by the very success of their words; the effect which they produce comes back to them so much increased that they are, so to say, overwhelmed by it. But when the orator succeeds in conquering his emotion and reacts on the crowd, one can see what repercussion of electric shocks must be established between him and his hearers—how both one and the other are in a few minutes carried far beyond their ordinary moral intensity.

“The same phenomena are to be observed in any gathering of sentient beings, of whatever kind they are; not only is the emotion of one of them communicated

to them all, but the larger the society the more intense becomes the common emotion.”¹

Unfortunately, it is impossible numerically to work out the dynamics of suggestion or of imitation on these lines, but in any gathering the phenomenon described is undoubtedly to be found. If we put on one side the hypothesis of telepathy, the intensification of feeling that is found under these conditions can be explained only by motor imitation. Even before the speaker has opened his mouth the audience adopts an attitude of attention. All looks are directed towards him, unnecessary movements are inhibited, and the whole assembly is physically as well as mentally concentrated upon the one man who is to address them. My own attitude, as a unit in the mass, is intensified by and continues to draw support from those of the persons on each side of me. I cannot see the remainder of the audience, so that their posture cannot act on me by direct imitation, but I know that they also are in the same state of expectancy. This knowledge increases the confidence of my own anticipation, and again tends to intensify my physical attitude, which again reacts upon my mental state. The presence of my fellow-auditors thus acts as a continual stimulus, and prevents my original mental attitude from dying away. It is the same when the orator is speaking. He makes a point and I cannot refrain from a slight motion of approbation; neither can my neighbours. I am confident that the hearers whom I cannot see are affected in the same way, and presently, when at the climax of a series of clever hits they break into a roar of applause and my confidence is justified, my nervous system is worked up to a high pitch of irritability which is prevented

¹ Espinas, *Des Sociétés Animales*, 1877, p. 200.

from subsiding by the expression of the same condition on the faces and in the persons of those around me. The orator by his art allows me to anticipate what he is going to say; I experience a slight feeling of satisfaction at my own perspicacity, and feel myself in direct *rapport* with him. The same feeling has been experienced by my neighbours (for the orator has accurately gauged the temper and intelligence of his audience), and there is the same motor expression and the same motor imitation followed by the reduplication of the feeling already there. And so the process continues indefinitely, limited in scope only by the weakness of the nervous system, which will not for long support such a strain without fatigue.

In this condition the feeling that I am in immediate mental connexion with my fellow-listeners is a common one, and is easily accounted for by the hyperæsthesia from which I am suffering. Under these circumstances I lose my power of judgment, and am carried away by arguments that would have no effect whatever upon me in cold blood. At the beginning of the speech the speaker will make only guarded allusions to the doctrine that he wishes to bring home to his hearers, but at the end, when motor expression and imitation have done their work, he will pour it forth like molten lava, direct suggestion will do its work, and I shall promise my subscription, or undertake to further the cause with alacrity. Half an hour later, when the audience has dispersed and the stimulus of imitation is removed, how weak, when I go through them, do the arguments seem! I knew them already, but they never affected me thus. This one is not an argument at all, but a gross *non sequitur*; this is a mere appeal to personal feeling,

and has no connexion with the matter in hand—yet I never noticed it at the time.

Even among cool-blooded northern peoples imitative contagion carries an idea through a community like wild-fire. "Quiet, moderate-minded citizens in times of political excitement become blind fanatics without judgment. The suggestive element which in a single citizen displays itself in its smallest and least observable dimensions, in times of political excitement accumulates in the common political life of a people until it produces mighty *mass-effects*."¹

The history of finance and of religion affords numerous examples of the manner in which these excitements and enthusiasms suddenly take possession of a large number of people at once. The persons affected may be of the most diverse kinds; all differences are levelled under the influence of some one strong and overwhelming passion which actuates all alike. Such a passion was the tulip mania in Holland in the years 1634-1637. The desire to possess bulbs came gradually into existence, and as it increased, the price of the better varieties naturally went up. Dealers then began to speculate in them, and did everything in their power to promote the fashion. They did this with such success, and the epidemic of tulip-buying spread so rapidly, that in 1637 one parcel of 120 tulip bulbs was sold for 90,000 florins. The tide turned, some of the holders of bulbs grew nervous, and, finally, the factor of collective suggestibility which had brought this senseless mob-excitement into existence destroyed it with equal rapidity. In a couple of weeks the same tulip bulbs that had been worth their weight in gold lost their value. A "Semper Augustus"

¹ Stoll, *Suggestion und Hypnotismus*, 1904, p. 577.

which had changed hands for 13,000 florins, sold for 50 only, and later on for 5. In spite of all the efforts of the tulip dealers to stop the panic, prices fell to nothing, and the speculators in tulips were ruined. Of a similar nature was the investing craze caused by the schemes of the financier John Law, in France, in 1719. Law promised vast fortunes to the shareholders from gold mines in the Mississippi valley, and from trading ventures in the East Indies, China, Africa, and elsewhere. The whole of France went mad with the desire to buy shares, although they possessed no information about the countries concerned, the nature of the trade, or the manner in which these vast profits were to be obtained. The prices of shares rose to fabulous sums until, as in the last-mentioned case, the whole thing suddenly collapsed, and in ten months the shares of the Company fell from 1800 to 40 livres.

Illustrations of the same tendency in human nature are afforded by the South Sea Bubble in England, by the lottery craze in England and in the Southern United States, and by the numerous runs on banks and financial panics, of which every community has its tale.

The history of religious enthusiasms is still richer in instances of the contagion of sentiment and of idea. The fervoured meetings that lead to sudden conversions and states of ecstasy, the manner in which an idea that may be abhorrent to other countries or ages takes sudden possession of a whole community, the acquiescence in the brutalities of the Inquisition, the widespread belief in witches,—all bear witness to the deep-seated tendency in man to motor imitation. Of the countless examples of this we will cite one only, which shows that children as well as adults are subject to such infection. The

most remarkable episode of the fourth crusade, in 1212-1213, was the piece of fanaticism known as The Children's Crusade. The idea that children as well as adults should play their part in the attempt to rescue the Holy Sepulchre from the Turks took hold of a number of boys and girls in France and in Germany, and, fostered by the usual concomitants of visions and revelations, spread like wildfire. Children of all ages—many were not more than twelve—and of all classes assembled together to the number, as is estimated, of 50,000. They started on their journey with the greatest confidence, but without any adequate preparation, and their friends and relatives tried in vain to hold them back. In many cases the enthusiasm was communicated even to adults, who helped the young pilgrims with money and provisions.

The end of this misguided expedition is well known. The German contingent made its way across the Alps to Italy, where they were robbed by the peasants. Seven thousand of them reached Genoa after suffering every kind of hardship, and it was with difficulty that a certain number struggled back to Germany again. The French division fared worse. Assembling at Paris, they proceeded as far as Marseilles, where two benevolent firms in trade with the East offered them a free passage and embarked them on seven ships. Two of the ships were lost at sea; the other five reached Alexandria, where the children were sold to Mohammedans as slaves.¹

It is the presence in schools of this factor of contagion that makes school education so immensely powerful for

¹ Stoll, *Suggestion*, p. 361, quoted from Michaud, *Histoire des Croisades*, iii. p. 616.

good or for evil. A large class certainly increases the work of the teacher out of school, but an observant teacher knows well how much more interesting it is to teach a large class than a small one, and how much stronger the suggestive element can be.¹ When Locke and Spencer decide against the boarding-school as a medium of instruction they omit all consideration of the contagion of numbers. Had either of them been a schoolmaster he could scarcely have failed to notice the phenomenon, and probably would have arrived at a different conclusion. Indeed, Spencer's argument against the boarding-school, that it places the pupil back into a state of society far less advanced than that in which he was born, is in itself, for those who believe in suggestion and realise how much imitation may increase its power, a plea in favour of such institutions, since in this way it is insured that children shall be placed in an environment suited to their stage of development, and therefore likely to be suggestive, and that they shall live under conditions of equality, and therefore be likely to imitate one another. Comenius, who as a schoolmaster had that experience of boys and of schools without which it is illegitimate to treat of the process of education, was wiser when he wrote: "It is better that the young should be taught together and in large classes, since better results and more pleasure are to be obtained when one pupil serves as an example and a stimulus for another. For to do what we see others do, to go where others go, to follow those who are ahead of us, and to keep in front of those who are behind us, is the course of action to which we are all most naturally

¹ It is assumed that the number of pupils in a class should in no case exceed 30.

inclined. Young children, especially, are always more easily led and ruled by example than by precept. If you give them a precept it makes but little impression; if you point out that others are doing something, they imitate without being told to do so.”¹

The master’s suggestive influence is thus rendered far more powerful by the tendency of boys to imitate one another. He is like one who speaks below his breath in a labyrinthine cave, to find that his words are bandied from rock to rock and return to him with added volume. With boys this contagion is imitative in the narrower sense of the word. Among adults when a book or an idea obtains a sudden vogue this is largely the result of definite commendation by word of mouth. True, the idea is, as we say, in the air, but the cause is the whispered praise or the casual word. In school the process is different. Outside the pages of the late Dean Farrar’s stories of school-life, boys, with rare exceptions, confine their conversations to the social interests of the daily routine in and out of school, and when an idea, let us say, of good form, or the unwritten law that we call good tone, becomes thoroughly diffused, the process has been a far subtler one that depends upon a mixture of contagion of feeling, operating in the manner described above, with only the very smallest portion of verbally expressed views on the matter.

But while much of the master’s influence may depend on the fact that he is dealing with a class, and while he should never forget this, the effect of such human association will be lost unless on every occasion the boy believes that his teacher is interested in him personally and separately. Most men begin their teaching careers

¹ *The Great Didactic*, chap. viii.

by taking charge of a fairly large class, and, before they are aware of it, acquire the habit of handling a class as a whole without much reference to the units of which it is composed. Such a teacher, judged by a certain standard, is often an extremely good one. To teach a class as a whole is one of the tests of schoolcraft. A considerable amount of formalism and mechanism is necessary to promote discipline and insure impartiality, and these are the bases of good teaching ; but discipline may degenerate into the repression of the drill-sergeant, and the drill-sergeant may teach a class for a year with little trouble to himself and with results that are good on paper, yet without ever realising that his pupils differ very much in character. Indeed, in his class-room and as far as he gives himself the opportunity of judging, it is quite possible that they do not. In such a case he will not get into touch with the individual, he will not make each boy feel that he is a friend as well as a teacher, he will miss the countless opportunities of putting heart into a despondent boy and administering judicious snubs to a conceited one ; individually and collectively he will not get the best work out of his class, and if the units are not affected, contagious imitation between them is impossible. It is said of Arnold that his success in dealing with boys was due to his modest beginning with a few pupils at Laleham. He thus acquired the habit of realising that each boy had an individuality, and that his business was to get into touch with it. Without this personal contact there will not be the reverberation of influence that class teaching promotes, and the scope of suggestion will be correspondingly limited.

CHAPTER VII

CHARACTER, METHOD, AND SUGGESTION

TO all teachers worthy of the name there comes at a certain period an awakening of the educational conscience. This awakening cannot be prematurely hastened ; it must be a spontaneous growth. It demands a knowledge of educational conditions, but does not necessarily arise out of it. It implies a sympathy with boy life, yet frequently does not accompany it. Its essence is a conviction that the idea environment supplied in the curriculum is effective in building an ideal construction in boys' minds, and that this ideal construction in the last resort exercises a control on conduct. It involves a belief that ideas ultimately tend to form character, and the result of this conviction is a deepening of the interest taken in school work.

The word "deepening" is advisedly used ; for it must not be supposed that a teacher can take no interest in teaching before the awakening comes. Far from it. Some teachers, no doubt, cordially dislike their work at first, though they come to take an absorbing interest in it later on ; but it is none the less true that the majority find enjoyment in it from the beginning. To many the mere society of boys is pleasant ; to others of an organising nature it is congenial to possess authority and to

exert it; to others deeply interested in their subjects it is at first sufficiently agreeable to expound them. But these interests are often transient. The time comes when the question is asked: "Can the subject I am teaching have any effect on my pupils' character and conduct?" The educational conscience is awakened, and, unless some satisfactory answer can be given to the question, enthusiasm may die away and nothing but a sense of futility remain.

That this is not an imaginary situation is sufficiently shown by the statements of experienced teachers, who question not only the moral, but even the intellectual value of the work in which they have been engaged. Mr. Leighton, a headmaster of many years' standing, writes: "The great boarding-schools turn out too high a percentage of failures—young men who seem to be useless for any forthcoming piece of this world's work. . . . Only a minority of boys—about one in four—is capable of profiting very much either by books or by laboratories. Education as distinct from instruction requires that the environment shall contribute more than the schooling."¹ And again: "There are groundless expectations, followed by disillusionment and scepticism. . . . This scepticism which I contend to be almost universal."² Another writer, also a schoolmaster, is even more outspoken: "A generation is growing up in which the clever boys are apt to be prematurely *blasés* with artificial learning, and the rest contemptuous of the enemy who laid so blighting a hand on the golden days of boyhood, and is now seen by the grown-up man to be a mere toothless, mumbling giant. . . . A few genera-

¹ R. L. Leighton, *The Boy and his School*.

² *Op. cit.* p. 91.

tions more, and the nation will feel towards education as the French before the Revolution felt towards their religion—no longer able to believe in the one particular form whose hollowness is at last too patently visible, and yet incapable of grasping any other.”¹

If views like these are common, still more if they are justified, it seems scarcely worth while to consider the whole business of teaching with any seriousness. If, on the other hand, the conviction is strong that ideas properly introduced take possession of the whole mind and affect the springs of conduct, the further question arises: “What is the proper mode of introduction?” In other words, the problem of method becomes of paramount importance. The teacher of to-day is not the first person who has asked for a method. Many wanderers through life have felt the need of a method to guide their conduct: Descartes was induced to seek a method to guide his reasoning; from Comenius to Rosmini writers on education have sought a method by which clearness in exposition may be secured. Our teacher differs from these in that the possibility of attaining his end is vigorously denied. No one doubts that the conduct of life can be improved by a system, or that logical rules can aid the reasoning powers, or that the principles of gradation and arrangement can facilitate clear exposition; but it is frequently asserted that ideas have no power to modify conduct, to control emotion, or to form character, and the position is a plausible one, for we are all familiar with well-informed men who have no force of character, and with narrow-minded and ignorant ones who are self-controlled and energetic, and who bring their surroundings into harmony with their wishes in the most surprising way.

¹ Coultou, *Public Schools and Public Needs*, p. 207.

Writers who base their arguments on a superficial psychological analysis or on none at all are ready to maintain that character is innate and inalterable. "It is easier for a blonde to convert herself into a brunette," says Rousseau in his *Nouvelle Héloïse*, "than for a man to change his character." "Can a man change his character?" asks Voltaire, replying, "Yes, if he changes his body." From another standpoint writers like Newman deny that the idea environment given by a liberal education can affect the springs of action. It is worth while to quote *in extenso* a passage from Discourse V. in his *Idea of a University*: "Liberal education makes not the Christian, but the gentleman. It is well to be a gentleman; it is well to have a cultivated intellect, a delicate taste, a candid, equitable, dispassionate mind, a noble and courteous bearing on the conduct of life; but, I repeat, they are no guarantee for sanctity or even for conscientiousness. Taken by themselves they do but seem to be what they are not: they look like virtue at a distance; but they are detected by close observers and in the long run. . . . Quarry the granite rock with razors, or moor the vessel with a thread of silk: then may you hope with such keen and delicate instruments as human knowledge and human reason to contend against those giants, the passion and the pride of man."

Here Newman is speaking in the name of the Catholic Church. He is decrying the influence of the intellectual environment and the effective value of ideas as motive power that he may extol the influence of religion. But his standpoint, although it suits his religious convictions, is not necessarily derived from them. His psychological presupposition of a fully developed mind which will function to its full extent if given the proper material to

work upon, the implicit doctrine of faculties, and the complete absence of the conception that mind is in a constant condition of becoming, make it extremely difficult for him to justify the position that in the long run it is ideas that are vitally important ; that, though they may not constitute the whole mechanism, they set it in motion ; that, without themselves being the trains of powder, they are the sparks that fire the magazine. For Newman the mind works in closed compartments. Liberal education gives a justly proportioned outlook and a capacity to enjoy intellectual pleasures ; over the passions and the sentiments it exercises no control, and is therefore valueless for purposes of guidance in the more difficult and dangerous situations of life.

Now this view, if accepted, must lead to educational pessimism, and of this, as we have seen, there is no lack. If ideas are powerless as controls, the value of class-work, which to a great extent consists in placing ideas before the young, appears on examination to be very small, except in so far as these ideas represent knowledge of conventional, professional, or commercial value. That it gives exercise to the common factors of all mental process, attention and observation, and that it involves a wholesome compulsion to do what is distasteful, will readily be admitted. But it may be urged that similar opportunities are given by the situations of professional and commercial life, and that it is therefore scarcely worth while to expend much energy in considering problems of method or of curriculum. Yet the greater part of the energy and the time of the teacher is spent in the class-room and in teaching definite subjects, and it is therefore not surprising that men who are interested in their profession readily embrace any theory

that appears to lend validity to the business of their lives.

Such a theory is afforded by the Herbartian psychology, and the insidious flattery that it supplies to the teaching profession has insured its popularity among those whose enthusiasm is greater than their critical powers. For Herbartians feeling and will arise out of the interplay of ideas; and, as the introduction of ideas in one form or another is a comparatively easy task, the formation of character through curriculum and method seems easy too. Alas! investigation shows that the Herbartian system is hopelessly one-sided. It leaves out of consideration all the stubborn elements of inherited instinct; it fails to convince us that feeling and will are not forms of mind as ultimate as intellect. It is, no doubt, possible to interpret Herbartianism in such a manner as to read into it the positions of modern psychology; but this method of dealing with a system which has its definite place in the history of psychology is discredited. The problem of the relation between knowledge and conduct is one for which it is not likely that a final solution will ever be found. Each age must conduct the investigation from its own standpoint, and for educational theory to coquet with worn-out psychologies is undignified, for it is a confession of weakness, and unconvincing, for it brings an exploded psychology to support positions that need whatever aid modern philosophy can supply.

It is from a modern standpoint, then, that the attempt to show the influence of ideas on character must be made, and a preliminary inquiry into the nature of character is necessary. No term is more often used by those who write on education, and to few terms can so many different meanings be assigned. Yet when, with

a practical end in view, we seek for enlightenment as to the elements of which it is composed, we find that the answer is not so satisfactory as the claims of modern psychology would lead us to suppose. Neither the analysis of character nor the modes of influencing it, which might be derived from such an analysis, have advanced as far as was anticipated in the latter half of the last century. It was J. S. Mill who, in England, first drew attention to the great importance of the subject in connexion with educational theory, and who suggested the name Ethology for the science of which the study of character would form the subject-matter. "A science is thus formed to which I would propose to give the name of Ethology, or the Science of Character, from $\epsilon\theta\omicron\varsigma$, a word more nearly corresponding to the term 'character,' as I use it here, than any other word in the same language. The name is perhaps etymologically applicable to the entire science of our mental and moral nature; but if, as is usual and convenient, we employ the name Psychology for the science of the elementary laws of mind, Ethology will serve for the ulterior science which determines the kind of character produced in conformity to those general laws by any set of circumstances, physical and moral. According to this definition, Ethology is the science which corresponds to the act of education, in the widest sense of the term, including the formation of national or collective character as well as individual."¹

The science of Ethology, thus confidently adumbrated, has made comparatively little progress, but this is not because the subject has been wholly neglected by psychologists. Although in Germany and in England

¹ J. S. Mill, *Logic*, Book VI. chap. v. sec. 4.

little that is systematic has been done, a series of works bearing the names of such distinguished writers of the French school as Paulhan, Ribot, Fouillée, and Malapert, testifies to the natural interest of the Latin mind in character-analysis.¹ If the reader arises from a perusal of these works with a feeling of disappointment, this is probably because their aims have been too ambitious; starting from the analogy of a zoological classification, they have been in too great a haste to formulate genera, species, and subspecies of character to which any given individual instance could be referred for explanation, while all the time the analysis of the general basis of character and the terminology of the subject have been in a very imperfect condition.

Two clearly defined standpoints from which to treat the subject have been adopted. That which refers character to physical conditions, and attempts to give a medicinal or physiological explanation of its varieties, and the confessedly psychological mode of treating the subject which considers character as a complex of psychical elements and aims at tracing the laws of their combination.

The physiological explanation takes us back to Hippocrates, who systematised the scattered views of Anaxagoras and Democritus into the theory of the four humours—blood, phlegm, bile, and black bile; which are in turn related to the four fundamental elements in nature—moisture, dryness, heat, and cold, with four temperaments depending on them. This classification, slightly modified, was adopted by Galen, who dis-

¹ Paulhan, *Les Caractères*, 1893; Ribot, *La Psychologie des Sentiments*, 1896; Ribot, *Essai sur les Passions*, 1907; Fouillée, *Le Tempérament et le Caractère*, 1895; Malapert, *Les Éléments du Caractère et leurs Lois de Combinaison*, 1897.

tinguished nine temperaments, of which the four composite ones were produced by the predominance of heat and dryness, of heat and moisture, of cold and dryness, and of cold and moisture, with the names of the choleric, the sanguine, the melancholic, and the phlegmatic temperaments.

This theory is of especial interest because, although the physical and physiological ideas underlying it have long been discarded, the terms still remain in use and are commonly employed when discussing character. We still refer to a friend as choleric or phlegmatic or sanguine, and the terms, though not very well defined in our minds, do nevertheless cover certain groups of characteristics. We do not, however, imply that the qualities in question are produced or even accompanied by an excess of bile or of blood.

The explanation is that the classification of temperaments was really a psychological rather than a physical one; it represented certain groupings of psychic qualities which are commonly found together. Modern descriptive psychology is content with a classification based on observation, and with an attempt to trace the origin and growth of complexes that seem to hang together. It recognises the desirability of showing the connexion between psychic process and nervous or organic conditions; but it deprecates any too hasty attempt to establish this connexion, and is content to pursue psychical analysis on the one side, and research into the physiology of the nervous system on the other, and to look upon the establishing of the psychical conditions of a mental state as a sufficient explanation for the time being.

It was not so with the earlier adventurers in the

field. For them the psychical explanation would have been as good as none, and they were therefore driven to account for mental qualities by attributing them to the agency of the bodily organs with which they were familiar. How correct the classification of the temperaments was on the psychical side is shown by the adoption of a very similar arrangement by Wundt.

Starting with a distinction between the strength and the speed of psychic movements, he points out that some persons are inclined to have strong emotions, and others to have weak emotions, which gives the distinction between the strong and the weak temperament; that some again vary their emotions rapidly, and others slowly, which gives the distinction between the quick and the slow temperament. Combining these qualities in pairs we get a classification very similar to the old one of the temperaments. The strong and quick temperament, the choleric; the strong and slow temperament, the melancholic; the weak and quick temperament, the sanguine; the feeble and slow temperament, the phlegmatic.¹

The tendency to supply an organic basis for mental states, which is so well illustrated by the theory of the temperaments, is as strong now as it was in the time of Galen. In the first half of the nineteenth century Descurets traced the passion of love to chronic disease of the heart and lungs, ambition to acute or chronic inflammation of the digestive organs, and envy and jealousy to the dilatation of the blood-vessels or to hypertrophy of the liver.²

A still more remarkable illustration is found in a recent attempt by Mr. Jordan to establish a connexion

¹ W. Wundt, *Grundzüge der Physiologischen Psychologie*, 3rd ed. vol. ii, p. 422.

² Quoted by Ribot, *Essai sur les Passions*, p. 52.

between anatomical and physiological structure and mental disposition.¹ He noticed that the women who came into hospital suffering from injuries inflicted by their husbands had something peculiar about their personal appearance. "I came slowly to see that the skin of the assaulted women was often clear, their hair-growth was never heavy or long, and the eyebrows were spare and refined. Their upper spinal curves were so formed as to give a somewhat convex appearance to the back and shoulders, and a more or less forward pose to the head."

These women, he ascertained, were those with sharp tongues who had been assaulted because they nagged at their husbands continually. As distinguished from them he observed a small number of women who were brought in seriously injured or dead. They differed from the others in skin and hair and skeleton. The spine was straighter, the head and neck and shoulders were held upwards and backwards, the hair-growth was abundant, and the eyebrows marked. These, he discovered, were the women who had been assaulted by husbands acting under the influence of well-founded jealousy, and with clearly murderous intent. On this basis he attempts to distinguish between two temperaments existing in close connexion with anatomical structure—the active or tending to be active, and the reflective or tending to be reflective.

"The less impassioned individuals are not merely active, quick, practical; they tend also to be changeable and fond of approbation. When the mental endowment is high and the surroundings favourable, the active and less-impassioned temperament furnishes many of our

¹ F. Jordan, F.R.C.S., *Character as seen in Body and Parentage*, 1896.

finest characters. Sometimes, especially when the mental gifts are slight, the character is less pleasing: love of change may become mere fitfulness; activity may become bustle; sparing approval may turn to actual censoriousness; love of approbation may degenerate into a mania for notoriety.

“In the impassioned temperament, on the other hand, we find quite another group of elements: repose or even gentleness, quiet reflection, noiseless methods, tenacity of purpose. The emotions, good or evil, are deep and enduring. In this class also, especially when the intellect is powerful and the training refined, lofty characters are found. In it too are found probably the worst and most degraded characters.”¹

Mr. Jordan's theory is of especial interest, and has been quoted at some length because he is sufficiently consistent to carry the physiological-temperament position to its proper conclusion. “If character is for the most part a product of organisation and parentage, it follows that education is mainly a physiological art. It is an art which should aim at strengthening feeble, repressing exuberant, and correcting perverted nerve.

“The first duty of the physiological educational artist who accepts the teachings of physiology, and who will in future come to be the one supreme, confidential ‘Father Confessor,’ is to study the character, that is, the endowments, proclivities, conduct, the gifts, defects, and eccentricities of the parents.”²

¹ F. Jordan, F.R.C.S., *Character as seen in Body and Parentage*, 1896, pp. 1, 2, 6. In the course of the work diagrams are given to show that the less impassioned temperament is illustrated by the skeletal poise of Newman, Napoleon, Wesley, and Spurgeon; and the more impassioned temperament by that of Burns, Dante, Hawthorne, and Byron.

² *Ibid.* p. 98.

If indeed the basis of character is entirely physiological, it is difficult to see what influence the teacher can have upon it. Our only course will be to dismiss the existing staff in all our schools and fill the vacant places with qualified medical men. Before taking this extreme step, the statement of the case from the other standpoint, that of psychological analysis, must be considered.

In summing up a man's character, says M. Paulhan,¹ we may call him (1) equilibrated and serious, or capricious, contrariant, and incoherent; or (2) calm or passionate and vivacious; or (3) a glutton or abstemious. These judgments are on different planes. The first depends on the nature or general form of the association processes that control mental activity. The second depends on the different manners in which the elements can realise these general forms. The third depends on the preponderance of certain tendencies. For purposes of simplicity the classification may be reduced to a twofold one: (1) The classes of qualities that depend on the manner in which tendencies exist; on their coherence, their vivacity, and their tenacity; that is to say, on the forms of essential activity. (2) The classes constituted by the tendencies themselves; that is to say, by the concrete tendencies which direct that activity. It may, of course, be urged that the particular forms of association are the effects of strong tendencies, and not their causes, and in that case if the tendency is referred to an organic basis, the matter remains much where it was under the auspices of the temperaments. At the mention of association, however, the teacher may regain his courage. Association is a process over which instruction can

¹ Paulhan, *Les Caractères*.

exercise some influence. I cannot alter the poise of my pupil's skeletal disposition, but I can affect his modes of association; I can at least to some extent control the nature of the ideas that are associated. Still further encouragement is given by M. Ribot. In his earlier work he certainly lays more stress on the organic basis. "The affective states are the deepest seated in the constitution of character. They are the bed-rock; the intellectual dispositions are superimposed. Intelligence is never a fundamental element in character. Intellectual dispositions can operate only indirectly on its constitution."¹

From this standpoint desire appears to be supreme, while intelligence is merely superficial, and character is the preponderance of an instinct or of a group of instincts. But the maturer analysis to be found in his *Essai sur les Passions* indicates an avenue of escape. Emotional life still constitutes the basis of action, but it is to be found at different grades of organisation. There are (1) affective states of psychic life, the raw material; tendencies and desires inherent in the psychophysical organism. (2) The emotions, which are nothing but sudden reactions. The egoistic—fear and anger; the altruistic—pity, etc. (3) The passions, which are among the important constituents of character. These are opposed to the emotions *by the predominance of an intellectual state*, by their stability and their relative duration. Emotion is thus a primitive state, passion is a secondary and more complex form. In the beginning the passion is instinctive and impulsive.² "More often the passion is already formed before the consciousness is aware of it.

¹ Ribot, *La Psychologie des Sentiments*, 1896, p. 393.

² Ribot, *Essai sur les Passions*, 1907, p. 138.

Without talking of the subterranean labour—unconscious or subconscious—which is a very probable if not certain hypothesis, there are produced in the consciousness first fragmentary tendencies, scattered, momentary, all leading in the same direction of attraction or repulsion for the same person, the same thing, the same idea. This movement of advance and recoil follows the law of nervous excitation—it advances like an avalanche, it rolls up like a snowball, or, to use scientific language, it works by summation.” Finally, it is intellectualised. “It is a positive and precise fact which marks the moment when the passion is constituted and which serves as its criterion: *it is the apparition of the ruling, guiding idea, recognised as such.*”¹

In this description of the development and organisation of the deep-seated, stable, and intellectualised impulse which he calls a passion M. Ribot gives us the distinctive marks of character as the term is used by the educationist. The word may be and often is employed in a more general sense. It may imply simply the characteristics that distinguish one personality from another. It need not even involve the conception of strength. “A very colourless character,” says La Bruyère, “is that of having none.” It is certainly a characteristic, like many other peculiarities of disposition to which we should shrink from applying the word character, though we could not neglect them when passing judgment on their possessor. At the next stage the term may be used to denote the possession of strongly marked tendencies, which though they may lack duration, and may manifest themselves in a fragmentary and unaccountable manner, still give an appearance of strength when compared with

¹ Ribot, *op cit.* p. 139.

the attributes of the colourless man. At the next and last stage we find the original impulse so intellectualised as to be stable and durable. The idea which is now the conscious guide may develop into a whole system of ideas, the greater or less complexity of which will determine the fixity of purpose. Further, the idea which in the beginning, as grafted on the organic tendency had an almost parasitic existence, now tends rapidly to modify and in some cases to destroy the parent stem, and may even substitute for it another though cognate impulse more suited to its matured form. We then have a developed character the basis of which is less an organic tendency than a system of ideas which embodies a principle. When we talk of character in this sense we have in mind not characteristics, but will ; we think of a habit of reasoned action which is so stable that it can be conceived of as functioning uniformly under varying conditions. The basis may have been organic, but the finished product is psychic, and the means by which it is reached are concerned with mental rather than with physiological factors. By temperament a man may be a weak phlegmatic, but this natural disposition may by some intellectual passion be converted into a strong phlegmatic, or electrified into vivacity. He may be of an explosive disposition ; but the pursuit of an ideal may necessitate constant control and equability, the explosive tendency may find itself pent up behind a triple wall of constraint and later of habit, until finally it grows weak and perishes from lack of function.

For the educator to make good his claim as a moulder of character, it is, in the first place, necessary for him to show that ideas affect the direction of will ; that the line taken by a certain quantity of mental energy is

determined by impulses, and that these in turn are partly conditioned by ideas.

A common and a useful treatment of the will process is to distinguish between the two elements impulse and idea of end. When I act from impulse I tend to act blindly and instinctively ; there is no preperception of the finished act. In instinctive action the idea may be wholly wanting. The young bird swims automatically when placed in water for the first time : there has been no idea of end in his consciousness ; he simply reacts upon his conditions. Higher up in the scale it is difficult to isolate the impulsive element and consider it apart from the idea of end, because the two are usually found in close connexion ; but it is easy to find an instance in which the idea of end is very little illuminated in the field of consciousness. The confirmed drinker whose hand finds its way automatically to a tumbler is little conscious of a guiding idea : his impulses have been developed by habit, until the smallest possible idea stimulus will excite them to action. At the next stage we have a well-marked fusion of impulse and idea, as when a lady's charitable impulses are quickened by the sight of a poor man, almsgiving being the result ; while at the other end of the scale we may find the idea developed, but the impulse weak. Here the idea of almsgiving may be present to the mind, and the distress of the beggar may be thoroughly understood, but there is no charitable instinct, there is no impulse that can be galvanised into action, and the result is that no action follows.

We have here three cases : the impulse that works almost instinctively as soon as the necessary situation and the smallest possible amount of idea stimulus are

present, the impulse that works normally when it fuses with a clearly realised idea, and the well-developed idea that fails altogether to issue in action because no impulse is there to make it an efficient motive. Unless the spontaneous tendency to action which we have called "impulse" be there, the idea is powerless, no matter how far it be developed or how vividly it may be present in consciousness. No matter how skilfully the evil effects of drink are demonstrated to a confirmed drunkard, his conduct is not in the least affected thereby. He understands the ideas presented to him ; he probably recognises their logical validity ; but on his conduct they make no impression. There is no impulse for them to coalesce with, and thus they remain dead and inert. And yet not more dead or more inert than most of the ideas with which the mind of the average man is filled at the end of a period of average education. By far the greater part of the ideas that have been so carefully worked into his mental system find no echo in his prevailing impulses, and stand in scarcely any relation to his actions.

From a certain standpoint a pupil may be looked upon as a parcel of impulses. Without this element, action of any kind, whether momentary or continuous, is not found ; and the object of the educator is to introduce ideas in such a manner that they stimulate these impulses and bring them into action. Over the impulses themselves his control, if less direct and less easy, can still be effective. Undesirable impulses may be given no chance of functioning, and will therefore atrophy ; desirable impulses may be fostered, and the ideas that encourage them may be kept to the front. In cases where the exact nature of the impulses present

is uncertain, a variety of stimulating ideas may be introduced, in the hope that one of them will meet with a response from among the spontaneous tendencies present. These impulses may be compared to a number of rifles lying loaded: they are silent and ineffective until the right idea is introduced and pulls the trigger. In the man who seems to know, but who is unaffected by his knowledge, some one of the conditions is lacking. Either the rifles are not loaded or the trigger mechanism is faulty, in other words, the impulses are absent or lacking in strength, or the right idea is not there to pull the trigger; or, even if there be an idea, and, viewed objectively, it seem to be the right one, there is something that renders it ineffective: for some reason or other it does not work, and dead knowledge is the result. The impulse is there, and the idea is right enough; but nothing happens, and we are driven to believe that the method of presenting has been faulty.

Given these premisses, our problem is how to present ideas so that they really do vitalise impulses, and we are again brought back to the question of method.

To the older writers on method the problem was a simple one. "There is in the world no rock or tower of such a height," says Comenius, "that it cannot be scaled by any man (provided he lack not feet), if ladders are placed in the proper position or steps cut in the rock, made in the right place, and furnished with railings against the danger of falling over. It is true that very few scale the heights of wisdom, though many start gaily on the journey, and that those who get any distance do so at the cost of toil, loss of breath, weariness, and giddiness; this, however, does not prove

that there is anything inaccessible to the human intellect, but only that the steps are not well disposed, or are insufficient, dangerous, and in bad repair—in other words, that the method is complicated. It is an undoubted fact that any man can attain any height that he may desire by means of steps that are properly disposed, sufficient in number, solid, and safe.”¹

This is the method of grading and demonstration. It is one of the triad of essential methods. It is the first that every teacher must master. To demonstrate well, if not the whole of good teaching, is an absolutely necessary foundation. This is an art that cannot be acquired in a few months. To realise into what sections a subject is naturally divided, how many distinct stages or processes of thought are involved in mastering each of them, what are the difficulties involved, and for which types of mind they are particularly formidable; to unfold a subject, chapter by chapter, during the term, avoiding unnecessary repetitions, and repeating the essential elements in a form that is ever fresh, so that tedium is avoided; to show how a conclusion is reached from particular instances, and to illustrate a general position by concrete examples; to work over one's subject from the teaching standpoint till the vital parts stand out in clear relief; to have in reserve a storehouse of illustrations and associations; to use this apparatus without any appearance of artificiality; to develop the course of work genially, whimsically, humorously, so that at the end, brought together out of an apparently spontaneous and heterogeneous mass of detail, each part lies in its proper place, and the whole, properly arranged and understood, is in the pupil's mind—all

¹ J. A. Comenius, *The Great Didactic*, chap. xii.

this takes labour and time, the labour and the time that no teacher by conviction is likely to grudge.

For conviction, however, some assurance is needed that the labour is fruitful, and it is not easy to be convinced that the very best demonstration of a system of ideas will insure that the hearer's conduct shall be modified by it. Experience teaches that the reverse is often the case. The most painstaking and logical exposition of vegetarianism, of abstinence from alcohol, of a new social system, of a new or of an old religion, may compel our attention, may excite our admiration and convince our reason, but as far as action is concerned may leave us cold. We agree that alcohol is harmful, and order a fresh supply from the wine merchant; the advantages of vegetarianism are evident, but as long as we have cash or credit we purchase meat. The method of demonstration has not solved our problem.

The second method in the triad is heurism. Rousseau discovered it; so, apparently, did Prof. Armstrong. It is a simple method—as stated by its advocates. “Heuristic methods of teaching are methods which involve our placing students, as far as possible, in the attitude of the discoverer—methods which involve their finding out, instead of being merely told about things. It should not be necessary to justify such a policy in education. Unfortunately, however, our conceptions are blunted by early training—or, rather, by want of training. Few realise that neither is discovery limited to those who explore dark continents or Polar regions, nor to those who seek to unravel the wonders of Nature; that invention is not confined to those who take out patents for new devices; but that, on the contrary,

discovery and invention are divine prerogatives, in some degree granted to all—meant for daily usage; and that it is consequently of importance that we be taught the rules of the game of discovery and learn to play it skilfully. The value of mere knowledge is immensely overrated, and its possession overpraised and over-rewarded; action, although appreciated when its effects are noted, is treated as the outcome of innate faculties, and the extent to which it can be developed by teaching scarcely considered.”¹

This is the new policy, and it is forced upon us as a cure for all educational evils, and, in particular, for the canker of dead knowledge, the knowledge that is never applied and that is not convincing enough to influence conduct. Armed with this new instrument, we are told, the teacher can insure that his pupils' ideas are living and effective, a stimulus to action and an ever-present guide to conduct. So great is the enthusiasm of the modern heurist for his new plaything, and so firm his conviction that the new method is absolute and of universal application, and, it must be confessed, so much good has already been done by the elements of virtue that it possesses, that it is legitimate to shrink from criticising it. We must, however, ask how far the method is possible, how far it can be used alone, and whether ideas gained through its means are necessarily living. For its validity as an exclusive method two conditions are necessary. The first is an inexhaustible fund of curiosity in children, and the second is infinite time. Many children are inquisitive, but they are particularly inquisitive about matters that are not pressed upon

¹ Armstrong, *Teaching of Scientific Method*, p. 236.

them as class work. The suggestion that the investigational process shall be continued longer than is quite pleasant has been known to destroy the whole of that eager thirst for knowledge of which the heurist tells us. The fund of curiosity is limited, and not to be relied on: it may fail us at any moment. Neither is our second condition forthcoming, and, without it, the portion of material treated will be too small for any effective appreciation of the subject to result. As a matter of fact, all application of heuristic methods is carried out by means of a large admixture of demonstration, and this alters the whole situation. Instead of a new method which can effectively be applied by any one, we have a new element which is useful in combination with other elements, but which needs in its user insight, experience, and many other qualities.

That ideas which have been arrived at by our own efforts are more likely than others to take possession of us, that the impulse that leads us to discovery is likely in turn to be powerfully stimulated by the ideas which discovery gives, may at once be conceded; but unaided heurism is impossible, and when we find it fused with demonstration we find also a third element present. Indeed, a critical examination of heurism is justified, because its supporters, by exalting it to be the leading principle in method, have completely overlooked a more important element, that of suggestion, while a sympathetic treatment of the arrogant claims put forward by the wild heurist is demanded by the great value for the promotion of suggestion of this element in the method complex.

Method, then, as a whole comprises these three factors: demonstration, heurism, and suggestion. Their

proportions may vary, sometimes one, sometimes another, taking the lead; but in all teaching which is to be effective, and especially for the guidance of conduct, suggestion must be given its due place. The subjects that we teach are ethical, logical, or æsthetic; their domain is the good, the true, or the beautiful, or they contain these elements in varying proportions. When we are dealing with a train of reasoning heurism is our surest method. In the elementary theory of arithmetic, for example, the pupil with a minimum of guidance can be made to do his own reasoning, and this holds good of experimental science, though to a smaller extent. In literary subjects, while heurism is by no means ruled out, demonstration and suggestion play a large part, and in all ethical teaching suggestion must be supreme. The whole art of the teacher consists in finding the exact blend of the three ingredients that will just suit his subject, his pupils, and himself. The conditions vary so much that the accuracy of the physician's prescription is impossible: even the vague directions of the seventeenth-century cookery-book are forbidden. Each teacher must mix his colours on the spot. We can say only this, that in every case all the elements are needed. In the laboratory, where heurism is supposed to reign supreme, it is nevertheless necessary to demonstrate to the pupil how the apparatus is to be used, and to suggest to him that the experiment is interesting, and in every way a desirable one to carry out.

What light does the method of suggestion throw on the problem of conduct and character? If the nature of the suggestive idea is as it has been represented, if an idea can be introduced in such a way as completely to avoid the arousing of contrariant and critical ideas, and if

it finds a system of living ideas in conjunction with selected impulses to work upon, its power to affect the direction of conduct can scarcely be denied; and if, further, the suggestive idea has been introduced when the mind is dominated by a strong effort of attention or conation, and remaining in a latent state is afterwards accepted as an auto-suggestion, we have here a constant source of guidance, a lever that turns the flood of mental energy into one channel, and by so doing inhibits activity in other directions; we insure a constant depression of all the impulses that might oppose, and by degrees deprive them of their faculty of being vitalised by a suitable idea. Examples of such suggestive ideas have been already given in the cases of Frederick Myers and J. J. Rousseau.¹

It might be urged that this is not to affect character viewed as the small habits and tendencies, often of no great importance in themselves, that make up the sum of personality; that the direction of energy may be altered, but that characteristics remain unchanged. We answer that this is indeed the case, and that the possibility of affecting outlook on serious matters, of inculcating principles and giving ideals of life, without at the same time interfering with the mass of peculiarities that make one person unlike another, is the very element that renders education desirable instead of the reverse. If it were true that character could be affected only by running all boys into the same mould, by rubbing off corners and eccentricities, by doing away with that difference of potential which leads to progress, it might then safely be maintained that education would be desirable in inverse proportion to its influence on those subjected

¹ *Vid. sup.* p. 60.

to it, and that when it gripped it could produce nothing but dull mediocrities, creatures of habit brought up to walk along the straight path of a cramping social code, virtuous because possessed of too little initiative to kick over the traces, supplied with a moderately good taste because too inert to question the literary standard imposed upon them.

Such mediocrities might easily, would almost certainly, be produced by a course of interesting demonstrations given to a certain type of docile boys by a teacher sufficiently energetic to make them attend and submit to a rigid school-routine, and their production might not be avoided by such heuristic work as can be attained in school ; but they could scarcely be the result of a skilful combination of the three elements of method, with stress laid on the suggestion that produces auto-suggestion at a later date. Such teaching would not tend to rub off corners or to diminish eccentricities, but would turn a given character with the peculiarities and roughnesses characteristic of it to exploit its ruggedness in a desirable channel rather than in an undesirable one.

Can education do more than this? Is it possible not merely to direct but actually in some sense to increase the disposable mental energy of an individual? This is a problem that must be attacked in the following chapter. For the present one thing may be considered as certain. At any cost of trouble or of time the proper guiding ideas, the ideas that will produce interests, enthusiasms, and noble passions must be introduced, and in the right way. The phlegmatic boy who sits two-thirds of the way down the form, and who seems to oppose a passive resistance to all efforts to interest or arouse him, is the very boy who must on no account be neglected. If an

idea grips it will grip him surely; its development may be slow, but it will be very certain, and once it has guided him into a certain path of conduct nothing will turn him from it. Sooner or later this boy of tardy development will be goaded into activity by the economic stress of life. A lower motive than those to which he has been exposed at school, the crudely utilitarian aim of the merchant or the stockbroker, will convert him into a strenuous and active man. He will be a person of substance when the clever, talkative, and suggestible boy at the top of the form is struggling to keep his head above water in a learned profession. It will be the fault of his teachers if he does not use the influence that wealth confers in the promotion of the intellectual and moral welfare of society.

CHAPTER VIII

EDUCATION AS CREATIVE

WE have seen that an idea by its suggestive force can determine the direction in which any mental powers shall be applied. Can education by the presenting of ideas or by any other means do more than this? Is it possible for it actually to increase the mental powers of the individual or of the community? The question has been answered with various degrees of optimism and of pessimism. "The importance of the law," wrote Robert Owen in 1849, "that to educate man is to manufacture a character for him has never yet been fully appreciated by any nation, people, or individual in any period of man's history except Lycurgus; and according to the machinery used for the purpose the character will be well or ill manufactured, and the individual will of necessity become inferior, mixed, or superior in his qualities. This principle being known, it becomes as easy to manufacture the Spartan character to-day as when Lycurgus lived, if there could now be utility in forming a character of high military spirit, and with great personal prowess and self-denial. But the time is now passing to require any mere sectional character which has now or previously been manufactured in any latitude or longitude. The period has arrived when the

progress of knowledge demands a character, physical, mental, and moral, of full-formed rational men and women; and the machinery is now required to manufacture from human nature this superior fabric, for the benefit of all who live and for future generations. . . . In short, to know scientifically how to manufacture the material of human nature—the most ductile of all materials—in its endless capacity for varied knowledge, goodness, and happiness, is to know how to change the present universal disorder, vice, crime, and misery into a terrestrial paradise; in which the onward spirit of each inhabitant will be to prevent the existence of any form of evil.”¹

Could any proposal be more confident or rose-coloured? Character is to be manufactured to order—inferior, mixed, or superior, whichever you happen to want at the time. The Bengali peasant can be infused with the military spirit, and the Pathan can be imbued with a love for husbandry, according to the demand for soldiers or for farmers. It is true that the language in which the promises are made is very loose, and that there is no actual undertaking that the amount of mental energy will be increased; but the writer evidently does not anticipate any limitations, and is prepared to guarantee anything to those who will help his educational schemes.

In matters of education we seem in this century to be less sanguine than in the last. “We talk of forming a character,” writes the President of Magdalen College, “or again, in somewhat ambiguous language, of licking a boy into shape, as though the teacher had absolute

¹ Robert Owen, *The Revolution in the Mind and Practice of the Human Race; or, the Coming Change from Irrationality to Rationality*, 1849, p. 74.

control over an inert and plastic material. The metaphor of the shower and the flower is more apt than that of the potter and his clay, or of the she-bear of legend and her cubs. . . . The educator has not as much liberty as the gardener. . . . He must deal with his human seeds as he finds them. Taking them thus, education cannot produce any faculty that is not in the human being already. It may appear to do so, but this is only because of the marvellous complexity of human nature. The more simple, to use scientific terms, is its relation to the environment, the less possibility is there for education. But the human being is not a simple organism, but one infinitely complex, and the interacting play of its faculties is infinitely various.”¹

This brings us down to earth with a thud. We can only feed the Pathan, drill him, and give him a gun; and in the same way we can only supply the peasant with food, drink, and a spade. There is no escape from the onslaught of the argument. While the enthusiastic (and probably inexperienced) schoolmaster is extracting the President of Magdalen’s bullet from his leg, Mr. Leighton gives him his quietus with a well-aimed shot. “No subject, no teaching, no plant or apparatus, however lavishly supplied, can create brain power, we can only save it from running to waste.”²

Now character can certainly be modified to some extent in its development, and brain power can certainly be saved from running to waste; the exact problem is to ascertain whether it is possible for education to

¹ T. H. Warren, *Education and Equality*, pp. 18-19.

² Leighton, *The Boy and his School*, p. 65. This work can be strongly recommended to the student of education. It is apparently written by a disillusioned headmaster, and in it is to be found almost every fallacy of educational theory, put forward in good and sometimes raucous English.

produce what is not already there potentially—whether “brain power,” or preferably “mental energy,” can in any sense be created.

It is well to begin by realising that in one sense it is a truism to say that nothing can be produced which is not already present. Without materials construction is impossible. The clay vessel, the steam engine, the new chemical compound, the new flower formed by cross fertilisation, the variety of hound produced by careful breeding, all of these depend on the previous existence of raw clay, pig-iron, simple salts, and common varieties of flowers and of dogs. Even in the case of Mozart's musical compositions the materials were there and only needed working up. Without the existing European scale and system of counterpoint Mozart's peculiar temperament might have produced Chinese melodies or early Church music, but not the particular compositions that made him famous. The intervals and the keys that he used were the same as those employed by the contemporary composers of popular songs, just as the colours employed by Titian were the same as those used by the local sign-painter. But when we speak of creation, and the use of the word in connexion with æsthetic production points to the real meaning of the term, we imply something more than the mere piling together of pre-existing elements ; we assume that some meaning has been given to matter that previously possessed none, or that additional meaning has been given where comparatively little was to be found. To the engineer, to the merchant, to civilisation, the steam engine means more than do brute heaps of iron and of coal ; to the housewife the earthen vessel means more than an unformed mass of clay ; to the musician one of

Mozart's symphonies means more than the same notes arranged in the scale of C major or as a music-hall ditty. If, therefore, it is true to say that each act of production is merely the rearrangement of existing materials, or even that each act of discovery is nothing but the combination and application of previous discoveries in the same field, it is equally true to say that each arrangement, if it has any end in view, if it is more than an idle destruction of previous combinations, is at the same time an act of creation in so far as it gives fresh meaning to the raw material used, and it may be that the teacher in manipulating and reorganising the mental elements and possibilities that he finds in his pupils is a creator in the truest sense.

Before we consider more closely the nature of the mental elements that he finds to hand, it will be well to deal with one other standpoint from which the enemy can decry the teacher's work. "There is now," he will say, "no greater a supply of Shakespeares or of Newtons than before the dawn of modern education with its elementary schools and its provincial universities; yet, if education had fulfilled the hopes of its promoters, men of surpassing talent ought to abound, whereas actually we find an increase among mediocrities of a certain standard and a relatively smaller number of outstanding personages." Stated thus, the argument is not wholly true, nor, if it were true, is it in place here. The question at issue is whether or not the amount of mental energy in a nation or in an individual can be increased. The minds of Shakespeares and of Newtons are no doubt extremely energetic, but the appearance of such men on the scene implies a great deal more than energy. It involves a particular combination of

great energy of mind, of peculiarities of temperament, of accidents of upbringing, and of social conditions. The genius arises much as freaks arise in nature. Out of the greatest possible variety of combinations one particular combination is produced which just happens to fit the surroundings or the present needs, and the greater the number of the elements to be combined, the greater is the number of combinations and the greater the chances that the particular combination that we call genius may arise. The two essential factors are energy in the individual and in the community, and the varieties of temperament and of circumstance that may give it its peculiar productive quality. All that we can ask from or expect of education is that it shall increase the first factor and that it shall not diminish the second. If it can satisfy both these demands its claims on the community are absolute ; but these considerations must be postponed till later while we review the teacher's materials.

The ideas that occupy the field of consciousness form but a small part of our mental life, and any conception of mind that restricts it to the connexion of ideas and feelings that can be immediately observed is wholly inadequate. In psychology nothing is more baffling to the introspector than to find that most of the processes which he is anxious to observe and to explain, in terms of their connexion with one another, go on as it were behind the scenes, while only the finished product emerges on to the stage. All the details of stage management, all the manipulation and coaching of the actors, all the busy details of preparation are hidden from view, and have to be either dimly felt or laboriously inferred ; the doors of the workshop are tightly barred, and we are allowed to have first-hand acquaintance only

with the finished goods in the shop window. This is true of every department of psychic process. We commit to memory and store the ideas in the cellars of our mind, hoping that they will be preserved intact. While they are there we are debarred from following their fate, yet when we recall them they are seldom or never the same. Sometimes they have shrunk, sometimes they have grown; corners have been clipped, fresh elements have been added; we notice the result, of the process we can observe no part.

I am in need of an idea; I know exactly the kind of idea that I want, I realise its empty form, the part that it must play in the completed structure, but I cannot hit upon it. What can I do? In one respect I am helpless. I cannot operate on the hidden springs; the mechanism and the levers that control it are concealed and unknown. But I know by experience that if I get into a certain attitude of mind, if I keep firmly before me my mental needs and group together what ideas I have, the required mental content may suddenly be shot up into my consciousness. Of the immediate conditions of its production we know nothing, and though we may conceal our ignorance by terminology, though we may say that the idea has been evolved by imagination or by association, these terms are merely convenient modes of stating our conviction that there is some mechanism—that ideas, like meteors, though they come out of the unknown, must have started from some given spot and under definite conditions. When our ideas are largely controlled by logical considerations, the influence of the subconscious is often obscured. If I solve a problem in geometry, and write the solution out at length, the whole idea sequence seems to have been present to

consciousness. Each element seems to be sufficiently conditioned by that which precedes it and by the goal of proof that is before me. But when the mind wanders unguided except by chance association, when in a daydream I pass from one idea to another, suddenly awakening to discover that I have travelled far from my starting-point, the subconsciousness generally has to be invoked somewhere to account for the links in the journey. In many cases, no doubt, I can say of the sequence of ideas that it is due to associations of contiguity which are easily accounted for: a was suggested by b , b by c , c by d , and so on; but then we reach an idea x which seems to have no connexion whatever with that which preceded it; the wires are hidden, they are below the threshold. I am looking at the sea when suddenly I find in consciousness the idea of a friend with whom I was once at school, and there seems to be no connexion between this and the idea of breakers which preceded. Yet I am driven to suppose that there was some connexion. I may once have been to the seaside with this friend, though I have now forgotten the fact; or there may be some subtle connexion between my feelings as I look at the sea and those that I once experienced in his society. Whatever the hypothetical connexion that I imagine may be, it is hidden from me, it is the work of my subconsciousness.

Though the operations of the subconscious are always present, they do not force themselves upon the notice of those who lead a routine life, whose mental transactions consist in piecing together the percepts drawn from daily observation in order to reach a result that is already known, much as a child fits together the fragments of the picture puzzle that lie before him on the

table, and whose stock of ideas is so limited that no one of them is below consciousness for long at a time. It is with men of original and creative minds that its working is chiefly felt, often with startling force. "What, you ask," writes Mozart to a friend, "is my method in writing and elaborating my large and lumbering things? I can, in fact, say nothing more about it than this: I do not myself know and can never find out. When I am in particularly good condition, perhaps riding in a carriage or on a walk after a good meal, and in a sleepless night, then the thoughts come to me with a rush and best of all. Whence and how—that I do not know and cannot tell. Those which please me I retain in my head, and hum them perhaps also to myself—at least so others have told me. If I stick to it there soon come one after the other useful crumbs for the pie, according to counterpoint, harmony of the different instruments, etc. That now inflames my soul, namely, if I am not disturbed. Then it goes on growing, and I keep on expanding and making it more distinct, and the thing, however long it be, becomes indeed almost finished in my head, so that I afterwards survey it at a glance like a goodly picture or a handsome man, and in my imagination do not hear it all in succession as it afterwards must be heard, but as a simultaneous whole. That indeed is a feast. All the finding and making goes on in me as in a very vivid dream."¹

The conception of the subconscious is necessary for the explanation of mental process; it is still more necessary for the explanation of conduct. I am conscious that I have just acted in a manner which was

¹ Quoted by von Hartmann, *Philosophy of the Unconscious*, Eng. trans., vol. i. p. 279.

wholly opposed to my ultimate interests. I analyse the situation. Let us suppose that I played golf instead of attending to my business. When making up my mind I realised clearly that my presence was needed at my office. I knew that my health was excellent and that I could not plead this as an excuse; all the motives for playing golf when weighed proved insufficient, and I resigned myself reluctantly to the decision that I must work as usual. Yet shortly, without any further deliberation, I started for the golf-links. My conduct has been determined by something outside or just on the margin of consciousness, by the complex of ideas, feelings, and impulses that forms the background of all conscious life, and that are themselves but dimly realised, occasionally rising out of the depths where in some form or other they lie concealed, only to baffle us by disappearing when we try to scrutinise them and discover their true nature. These subconscious elements are the basis of character and condition conduct to a far greater extent than the view of life that we express and by which we believe that we are actuated. When we see the better but follow the worse the blame must be laid at the door of the subconsciousness.

This subconsciousness, then, that plays such a part in conduct, must be organised or formed by the teacher who wishes ultimately to affect his pupil's conduct, and we have to ask what exactly the subconsciousness is. The term is a convenient one, and has been used as a rag-bag into which to stuff everything that proves difficult of explanation. In what state is an idea preserved when it passes out of my consciousness? As I am able subsequently to recover it again, either it or the conditions that produce it must exist somewhere. For an answer

we naturally turn to those who first started us on the way of ideas, to the founders of the associationist school in England and in Germany; but Locke, though he realises that the ideas which through the medium of sense-perception find their way into the empty cabinet of our minds must exist somewhere, when through lack of room they have to make way for other ideas that crowd them out, is not very explicit as to the nature of the limbo in which they await the time for their reappearance. He hints, indeed, that the brain is concerned, or animal humours, but goes no further than a hint. Herbart, it is true, goes into much greater detail about the mechanism through which he supposed the expulsion and the reinstatement of ideas to take place. "We must," he says, "explain the expression 'threshold of consciousness,' which we shall often have occasion to use. An idea is in consciousness in so far as it is not arrested, but is a true idea. It enters into consciousness when it just raises itself out of a condition of complete inhibition. In this case it is on the margin of consciousness."¹ When it is completely inhibited it is below this threshold, but like Locke, Herbart gives us no information about its exact nature when it is, so to say, an idea but yet not a presentation.

A brief discussion of the relation of the mind to the nervous system may help towards a clear position. Although of recent years there has been forthcoming overwhelming evidence that mental life is conditioned by neural process, there has at the same time arisen a disposition even among physiological psychologists to look upon mind as essentially different from the nervous system that conditions it, and to

¹ J. F. Herbart, *Lehrbuch der Psychologie*, Sechste Auflage, 1900, p. 18.

confess that the meaning of an idea and the physiological process that accompanies it are wholly disparate. The crude materialism of the middle of the nineteenth century, typically represented by a book like Büchner's *Kraft und Stoff*, which was ready to maintain that consciousness is produced by the nervous system, is no longer in favour. Wundt, it is true, states that "wherever we observe the mental functions, they are accompanied by the processes of nutrition and reproduction"; and adds that, "on the other hand, the general phenomena of life may be manifested in cases where we have no reason for supposing the presence of a mind."¹ He is, however, far from adopting the position that mind can be produced by the processes of nutrition and reproduction.

If we put on one side the definitely materialistic position, and if it be granted that we find the mind and the nervous system existing together, two theories are possible as to their connexion. The first is the theory of psycho-physical parallelism. This simply states the fact that mental processes are accompanied by neural processes. It supposes a physical train of causation accompanied by a series of mental states each of which is sufficiently conditioned or explained by its predecessors. The latent idea is alluded to as a "disposition," a term which is intended to be a guarded one and to avoid the imputation of materialism. This view has powerful supporters, but its weak point is that it is too guarded and explains nothing. It is not denied that the mind and the nervous system are found in close connexion, and psycho-physical parallelism merely restates the position.

The other and more intelligible view is the theory

¹ W. Wundt, *Principles of Physiological Psychology*, Eng. trans., vol. i. p. 27.

of interaction. This assumes that mind and the nervous system are found in juxtaposition, that the nervous system can influence mind, and that mind in turn can influence the nervous system. It is claimed that this is on the whole a description of the facts as far as we can observe them; while to the objection that it is impossible to conceive how two such disparate entities as mind and matter can influence one another it is retorted (1) that though the concept of causation is borrowed from natural science, and though in natural science we find interaction of this kind only between fragments of matter, the concept was in the first place originated through the consciousness that by an exercise of the will we can ourselves move matter, and that therefore we are but making the full use of a concept whose extent for the purposes of convenience has been erroneously limited by physics. (2) That the causation of physical science is itself, like the causation of the interaction theory, unintelligible without a further metaphysical treatment.

If we adopt the theory of interaction, how do we stand as regards the subconsciousness in which the remembered idea has in some form been stored? Unless we are careful we shall find that we return to the older and cruder materialistic position. A strong advocate of the interactionist view, Mr. M'Dougall, maintains that the latent idea remains only as a trace in the nervous system. "If the ideas themselves," he says, "do not continue to exist in the interval between perception and representation, then those links which we call the association of ideas, and which are the essential conditions of the reproduction of the ideas of objects in an order determined by the order of their perception,

cannot be links between ideas, but must be links between the nervous dispositions that are the necessary conditions of the revival of ideas, and must themselves be nervous dispositions.”¹

It is not easy to see how this differs from the materialistic position that is satisfied with regarding consciousness, or at any rate the content of consciousness, as produced by the nervous system. The whole basis of personality, in so far as this consists in the memory of past experiences and the reference of these to the same experiencing subject, is placed in the nervous system, and no loophole is left for the permanence of the person as an organised mind. The most obvious position to which the view leads is that of von Hartmann's Unconscious Mind, which is impersonal, and uses as its instrument any neural system into contact with which it is brought, the results of experience and latent ideas being deposited in the brain, and the mind itself being unable to remember and thus to become organised.

This objection might not in itself be sufficient if logical consistency demanded that the subconsciousness should be solely physical. This, however, is not the case. If we start with ideas in consciousness and conditioned by brain, we have no right to assume that the idea when in the subconsciousness is detached either from mind or from the nervous system. We are driven to suppose that the latent idea is present in a subconscious mind, and that in this state it is conditioned by or connected with a physical disposition, as is the idea in consciousness. The term “subconscious,” and not “unconscious,” has been used because it is necessary to

¹ W. M'Dougall, *Physiological Psychology*, 1905, p. 119.

suppose some consciousness remaining as a correlative to the neural trace, which we must conceive of as possessing the characteristics of neural life though not of full neural function.

In what sense can we conceive of the latent idea as in consciousness? To do so it is necessary to realise that all consciousness is not self-consciousness. We are conscious of self when we definitely set ourselves to consider our own personalities, when we actually compare present with past experiences, and when we find it necessary to adjust our attention, as when we are attending to a percept on the margin of consciousness, or find our minds wandering during the process of attending, or when we reach the end of a process of conation and are switching our energies on to another track with another aim in view. In all these cases, except the actual attending to the concept of self, there are processes of adjustment involved, and it is on these occasions that the feeling of personality is most prominent.

From this state of mind the consciousness that is not self-consciousness must be distinguished. When, in working out a problem or developing a conception, I become absolutely absorbed in the process—when ideas come readily—when there is no hitch, and the stream of thought flows steadily on,—on these occasions, which for most people come but seldom, I am oblivious of all around me, of my organic feelings, of my personality. My mind is, it is true, retentive, otherwise each link in the train of thought would not be conditioned by what precedes, but I do not remember in the narrower sense of the word. It is not until the end of the train of thought is reached that a sense of my

personality returns to me. Then, as I look back on the state of mind that is over, I am conscious that the ideas passed before me as if they were wholly out of my control. I seem to have been present at an act of thinking in which as a person I took no part, and of which at the moment I was but half-conscious. It is only when the train of conation comes to an end that I am fully conscious of what has been in my mind, and realise that, as the process was originated by me, it is mine and can be referred to my personality.

Now imagine this state of absorption indefinitely prolonged. In that case the train of thought which is developing will not be realised, there will be no pause during which the self will rapidly review it and recognise it as its own before proceeding to the next stage. Imagine, further, that the train of thought is never brought to an end. In that case it will develop continuously, unremembered, unrealised, unreferred to the self. It is in consciousness, but not in self-consciousness. If this state of consciousness is imagined as less intense, at a very low stage of activity and accompanying, not a developing train of thought, but a simple content of meaning which is thought and retained continuously, but is not remembered or realised, it is possible to have some idea of the condition of mind in which the latent idea is retained as a subconscious state, ready to be called up whenever it is needed, and to be linked on to the self-consciousness that is performing the work of readjustment to the environment of new impressions that ever crowd in from the outside world, even ready in conjunction with other latent ideas to split off as a separate system, and to emerge with a special pathological self-consciousness of its own, as in the

distressing cases of plural personality which have recently occupied the attention of psychologists.

It is in this mind, at least, as much as in the modifications of nervous tissue that we must believe experiences and meanings that have passed from consciousness to persist. Its presence allows us to believe in the development of personality as a psychic growth and organisation, and does not exclude the supposition that while the subconsciousness is normally to be found in connexion with a nervous system that has grown up with it, it may, in virtue of its organisation, as meaning continue to function and preserve the elements of its personal growth under other conditions or in connexion with a different system of suitable matter. From this standpoint every process of thought and every reasoned act helps to knit the self closer to the psychic system that it has itself organised, and those who attempt to train mental processes may thus hope to deepen the sense of personality at the same time that they widen the content of mind.

We have, then, a series of mental states which, while they are generally found in combination, can each be imagined as existing separately. Self-consciousness, in which the mind is throughout aware of its existence as an entity which possesses permanence, and which assigns wishes and desires to itself, and not to other minds; consciousness, embodying retention and a continuous train of thought, which is not aware of itself, but which can be recalled and referred to the self; higher subconsciousness, when ideas that have been on the margin of consciousness cannot directly be recalled, but have to be inferred from their effect upon our mental content or our feelings; and lower subconsciousness, which, in

spite of its remoteness, may yet influence the conscious mind, although until recalled to further some train of thought, that is to say, until it is wanted, it forms no part of our conscious life.

Correlated with these states we are bound to imagine a neural system in different stages of activity. The neural system and the mind mutually condition one another. In the mind is stored the meanings that have been in our consciousness; in the nervous system is stored the neural dispositions that these meanings have produced when coming into existence in our minds.

There are two avenues through which the educator can influence this combination of nervous tissue and of mind: he can drill the nervous system by habit, and he can change and enrich the mind content by introducing new meanings. The methods must often be employed together, but in their essence they are separate. One mark of a habit in nervous process is that it does not develop. You may train a dog to perform certain operations; once they are learned they are invariable, they do not initiate a train of other processes. An animal will not combine two processes that he has learned to make a third. Lack of plasticity is the mark of nervous habit. It is through this very rigidity that complicated mental process is rendered possible, since it presupposes a number of subsidiary processes that have become automatic. A large portion of early education consists in giving habits. Boys must be taught to read, to write, to be punctual, to have a stock of traditional knowledge, and to use the conventional symbols of daily social life; and of these acquisitions even those that imply knowledge are little removed from the plane of habit. It may be asked whether these latter should be

called habits of mind or habits of nervous structure. In so far as their rigidity is mechanical, and can be altered only by continued practice, they are habits of nerve; in so far as it depends on meaning and logical structure, and can be altered by the addition of fresh meaning, they are habits of mind. In many cases the term "habit" is used loosely to cover both aspects. When I talk of a habit of attention, I mean in part that the neural system connected with the mind adjusts itself readily to stimuli, but I also imply that the mind possesses a large stock of meaning which is imposed upon the new ideas that are presented to it. This is a habit, and possesses rigidity only in the sense that the stock of meaning is always present. Otherwise its essential mark is that it is variable, that is to say, that the right meaning to suit circumstances is continually brought to the front.

The second method, then, of building up the subconsciousness is by introducing meaning. The essence of ideas or of systems of ideas is that they develop, that they are in a constant process of being fused and separated, and that under the influence of purpose the ideas that are used to attain the end are constantly reformed and given fresh meaning by the new contexts in which they appear. We are driven to believe that these contents of meaning have some connexion with the nervous system, but it is extremely difficult to imagine any combination of neurones and synapses that could be the physiological counterpart of a meaning, and we must content ourselves with saying that mental process at a low level, when its connexion with nervous process is intelligible, comes under the law of nervous habit, and that mental process at a higher level, whatever may be the nature of its physical counterpart, does not.

For the educator this distinction is of far-reaching importance. Teaching of the conventional kind that trains nervous habit beyond the necessary degree of rigidity is to be dreaded in all educational development. The law of habit is so strong that it may well be believed that if the necessary steps were taken, and if education were carried out with the thoroughness that modern organisation will in the future provide, the educational mechanism might prove a powerful instrument for reducing all minds to the same level of conventional knowledge and process; that tradition and reverence for established custom of any kind, quite apart from its meaning for social or mental development, might become paramount, that initiative might be wholly checked, and the examination-bred youth be turned out well groomed and drilled, but without the mental energy that is so essential for breaking new ground. We have an example of this in China, and other instances are not wanting nearer home. Under such conditions the only hope of progress would be in those boys, and, fortunately, there would always be a few who are too sturdy to submit to the habituation process, or who, coming of wealthy parents, are enabled to escape the close-grinding mill and grow up under freer conditions, who inherit dispositions to command rather than to obey, to reform what is given to them rather than to accept it blindly, and who at the same time do not succumb to the enervating influence of luxury in the home and the prospect of economic security in the future.

The manner in which the premature ingraining of habits may stunt mental growth is well brought out by Mrs. Boole. "Parents should form a clear idea what is the scientific condition of mind, . . . they should

know in what consists the preparation for it. The typically scientific mind may be described as one which stands in a definite relation to As-Yet-Unknown Truth, and especially to that portion of the As-Yet-Unknown which is just below the horizon of knowledge. In proportion as a mind is non-scientific the occurrence of an unfamiliar phenomenon stimulates it to form some immediate classification or judgment. A new statement is hailed at once as true or false; a new fact is classified as good or bad, nice or nasty; an unfamiliar action as right or wrong, etc. In proportion as a mind is scientific, the occurrence of a new phenomenon tends to set it vibrating with a consciousness of coming revelation, and to start a certain cycle of mental attitudes, a cycle of the following kind: Homage, Attention, Observation, Analysis, Antithesis, Synthesis, Contemplation, Effacement, Repose, Judgment, or Classification. The cycle varies in duration; each phase may occupy a few seconds, or many months or even years. But the tendency to fall into some such sequence as that above described at the touch of a new fact is what constitutes the essentially scientific condition."¹

The training, on the other hand, in which habit has played too great a part leads to the hasty reference of new facts to conventional categories, whether they really fit them or not, and the automatism of the process by its rapidity prevents that suspension of judgment, that gradual feeling of the way, that readiness to adopt fresh modes of attack which are signs of the really active mind.

This situation of mediocrity and stagnation, while quite possible as the product of a certain kind of training,

¹ M. E. Boole, *Preparation of the Child for Science*, 1904, p. 15.

is none the less wholly unnecessary. Education need not be mechanical ; habit need not be unduly enforced ; convention need not be our guide ; the teacher can introduce meaning at every step ; and when he introduces it by the suggestive method, especially when he can produce auto-suggestion, he may feel assured that one suggestive idea, the result, perhaps, of a few moments' labour on his part, may develop and produce a rich crop of conceptions which will systematise themselves, and slowly give rise to a habit of mind which is a habit only in name, because the relation of each part to the others is determined by meaning.

In teaching of this kind lies safety for the future. How little this is realised may be seen in another quotation from Mr. Leighton. In making an estimate of the effect that schooling is likely to have on the pupil, he says : " If you reckon that a boy sleeps 63 hours of the week, spends 30 hours in school, and 12 more in preparation, these 42 hours of schooling only come to 40 per cent of his waking hours in a week of full work ; taking the whole year and allowing for vacations, the 40 per cent sinks to 30, and every one knows that even the 30 per cent is subject to enormous deductions under the heads of absence, and still more of inattention ; but the 70 per cent assigned to the forces other than schooling is liable to no deductions, unless it be for longer hours of sleep."¹

In other words, he would say, the influence of teaching is directly proportional to the percentage of the boy's life that is subject to it. For that portion of education which consists of the drilling in mechanical habits this is probably true ; indeed, it may be doubted whether, at

¹ R. L. Leighton, *The Boy and his School*, p. 2.

day schools at all events, the school routine can ever in this respect counterbalance the home surroundings if these exercise an adverse influence. But from the standpoint of suggestion nothing could be further from the truth. The length of school hours is largely a tradition from the days when boys were sent to school chiefly to keep them out of the way, and a little suggestive teaching may do far more to induce the pupil to give himself habits of a certain kind than the excessive drill which is cast off as irksome at the first opportunity.

We may now return to our original question, and once more ask if the amount of mental energy can be increased, or if our efforts must be restricted to guidance. On the side of the schoolmaster's work that is connected with drill and habit the physical law of the conservation of energy holds good. You cannot get more power out of any piece of mechanism than is either there to start with or is put into it from without. Drilling the young in habits consists largely in repression; one process is selected and is repeated until it becomes ingrained, to the exclusion of other processes. In the process of repression and selection there can be no increase of what was originally present. If I block up three water channels and divert all the water into a fourth, I do not increase the total volume of water; if in the same way I direct a number of streams of nervous energy into one channel, and allow them to wear a broad groove for themselves, the volume of nervous energy remains unchanged; its direction only is altered. In each case, however, an addition has been made: the arrangement may for certain purposes be more effective; it has, in other words, been given additional meaning.

On the side of education that deals with meaning the law of conservation of energy does not apply. In matter energy is limited, in mind it is not. The conception of energy was first derived, like that of causation, from the feeling of energy within us, and it received its limitation in the field of physical science because such limitation proved desirable. Not that physical science can ever prove that no energy has been added to the total complex, it can only demand that the energy on one side of the equation shall equal that on the other ; if energy were added to both sides in equal amounts it would be unnoticed. In mental processes the two sides of the equation cannot be equal, for the simple reason that the concept of equality does not apply. Mind cannot be measured, it can only be valued. A content of meaning has no quantity, but it has a value, and this value may be increased without limit by the proper development of the meaning. Meaning may be added to meaning, the fusion may be quite unlike its component parts and may have additional meaning, and consequently, for mental life may be of far greater value, and possess far more mental energy. When dealing with this side of the teaching process the schoolmaster has theoretically an unlimited scope. When he introduces meaning to his pupils he is building up within each of them a world of meaning, and in doing so he is not diminishing his own stock. Each new insight on the part of those taught is wholly to the good. Further, it is the nature of meaning that it may develop from within as well as from without, that by analysis of its own content fresh meaning is produced. Suggestive and auto-suggestive ideas have this power, and when they are present mental vitality

will be great. Consequently, if the teacher makes it his first aim to see that the subconsciousness of his pupils is a mind of meanings not always fully realised, but felt as desirable and ready at any moment to develop into auto-suggestions, he will be not only a director, but a creator of mind, a true producer of mental energy.

Meanings of this kind, when they develop, do so on the lines of the personality to which they are attached, and tend to accentuate it. The development of the suggestive idea can never be conventional; its mode of operation defies analysis; it frequently disappoints expectation, and as often it astonishes by its rate of growth. With an increase in mental energy comes a differentiation between the personalities in whom it is manifested, whereas with a drilling of personalities to sameness is found a lessening of mental energy. Given a sufficient number of suggestive teachers, and a consequent differentiation of one personality from another among their pupils, the play of circumstances will see to it that the freaks whom we call men of genius are produced in increasing numbers.

CHAPTER IX

SOME PRACTICAL APPLICATIONS

IN previous chapters the relation between suggestion and the other great principles of method has been discussed, as well as the general conditions of the teaching, which, while not suggestive in the narrower sense of the word, is yet necessary as furnishing the mind with living ideas for suggestion to work upon. It remains to ask what are the school subjects that most readily lend themselves to be the medium of suggestion, and what are the methods of teaching that the principles of suggestion demand.

In the early years of the last century, when the only subjects taught in our secondary schools were the Latin and Greek classics, with very occasionally a little mathematics, the question that has just been asked would have seemed meaningless to most schoolmasters. Even Arnold's curriculum at Rugby in 1835, though in many respects far in advance of the school practice of the time, since it included French, geography, and some mathematics, in addition to the ordinary classical grind, omitted altogether such subjects as English literature and natural science. As the century progressed, under the influence of external pressure exercised by men of science like Huxley and of money

grants from the Science and Art Department at South Kensington, and given additional force by the natural tendency of the struggling professional man to demand for his son an education that possibly might cultivate the income-earning capacity, natural science and an increased dose of mathematics found their way into the curriculum. The tendency towards encyclopædism has steadily grown, and many headmasters who at first were hostile to the newer subjects, have ended by acquiescing in the existence of modern sides, though they seldom express much confidence in the cultural value of the instruction given in them. As result, in many schools the educational sack is filled to bursting, the solution is saturated, subject is piled upon subject with a complete disregard of the doctrine of diminishing returns, which comes into operation in education as in every other process, and at a much earlier stage than would be the case if only a few of the simpler maxims for the compounding of a curriculum were attended to. As soon as a boy has opened his books at the right places or got his instruments into working order, and is beginning to get interested in the subject, the end of the period of work is on him, a bell rings, there is a shuffling of feet, books and apparatus have to be thrust away, and five minutes later a different lesson in a different subject, which for the boy often has no connexion with the last, is under way.

Most teachers and headmasters feel the congested state of the curriculum acutely. The tension becomes greater, and it is realised that something has to be given up. In many cases it is suggested that to clear out of the way the subject which has hitherto occupied most of the time, the Latin and Greek classics, is the

best means of giving room for expansion to the subjects that remain ; that if this Jonah be thrown overboard the pedagogic bark will be guided straight to its appointed haven with fair winds and an even keel, and all will be for the best in the best of all scholastic worlds. The distinguished author of *From a College Window* deplors that at the end of the school training in which he took an active part for twenty years, there used to depart "a slow river of cheerful and conventional boys, well dressed, well mannered, thoroughly nice, reasonable, sensible, and good-humoured creatures, but knowing next to nothing, without intellectual interests and, indeed, honestly despising them," the result being that "intellectual cynicism was the note of the place" ; and he thinks "that the solution is a very obvious one : it is at all costs to simplify and to relieve pressure. The staple of education should be French, easy mathematics, history, geography, and popular science. I would not even begin Latin or Greek at first."¹ Nothing is said about the methods of teaching these subjects, and we are asked to believe that in the hands of the same men, or of the same type of man, under whom "a great quantity of pedantic grammar was taught, and time was wasted in trying to make the boys compose in both Latin and Greek when they had no vocabulary and no knowledge of the languages," and who thus seemed to have lacked the educator's *flair* for the elements that really matter, as well as the knowledge of method that is no substitute for insight and does not necessarily produce it, but which may develop it when it exists in germ, the newer curriculum would produce intellectual interests and intellectual

¹ A. C. Benson, *From a College Window*, 1906, pp. 155, 156.

enthusiasm. It may be permitted to doubt this, and to believe that the newer subjects handled with the same lack of system and the same stupidity in selection that has sometimes characterised the teaching of the older ones, would produce just the same dreary tone and distaste for knowledge that is deplored in the finished products of such instruction. Are there no historical, geographical, and French pedants? Or is it likely that they will not be produced if they have to prepare their pupils for the numerous examinations that spread their nets for the middle class, and even for the upper class schools, examinations which appear to take but scant notice of the newer and more fruitful methods that are daily being suggested and demanded, and which wind their paralysing tentacles round the young enthusiast who wishes to work out his own methods on scientific principles?

Whatever may have been the faults of the older type of teacher (and, it may be added, of the rigid examination), he had one good quality that must be placed to his credit. He made his pupils work hard at subjects that they did not like. No one now believes that the chief object of sending children to school is to teach them to suffer injustice and to endure *ennui*; but we may from every point of view question the value of an education that does not habituate those subjected to it to bring to completion tasks which they dislike, and to concentrate themselves on subjects that do not appeal to them. From the newer subjects, apparently, the salt of drudgery which would season the boy for the drearier situations that life presents may be altogether omitted. "Why," says Professor Armstrong in an address to the British Association, "should there be any

set lessons in subjects such as history and geography? Nothing is worse, more stereotyped, more cramping to the intellect, than the set lesson of so many lines or pages of a sort of Liebig's Essence of information, with attendant obligation of committing the facts recorded in them to memory. The child, like the restive, high-mettled young steed, wants to be off and away—not to be held severely in hand. Why should not the method by which we get up a subject in later life be followed in schools? At least it should be properly tried. Let us give freedom to children, and at least during early years lead them to read hard and wisely; they will do so gladly.”¹ If they do so gladly, there is at least some result, if there is no discipline; but what if they do not?

Concurrently with the tendency towards encyclopædism, a tendency towards classification has marked the intellectual progress of recent years.

When scientific studies first came into prominence in the latter half of the nineteenth century, they found the field occupied, it is true, by the humanities, but not mapped out as in the possession of a number of organised subjects, well equipped with rigorous methods, which could claim to be real training-schools of reason and perseverance. The classics undoubtedly afforded abundant opportunities for diligence and thought, but the methods employed in teaching them were often faulty, while the other subjects usually classed as humanities—history, English literature, and geography—were either not taught at all or were taught on no method. There was, therefore, some validity in the claims of natural science that through its means for the first time the

¹ H. E. Armstrong, Ph.D., F.R.S., *The Teaching of Scientific Method*, 1903, p. 85.

principles of observation, classification, and inductive reasoning would be taught in schools. The situation did not long remain unchanged. Partly owing to the increased interest taken in the humanities, partly to the stimulus that natural science had given to the conception of method, and partly to the rise of scientific psychology, the view rapidly gained ground that human life and thought give as much scope as physical nature for accurate investigation and rigorous method, while as a result of this tendency we have to-day on the one hand the physical sciences and mathematics with their paraphernalia of methods and techniques, and on the other the sciences of human nature: sociology, economics, geography, and history, with their new apparatus for the investigation and establishing of fact.

On each side, therefore, we have subjects of instruction which admit of organisation, and in which a technique could be devised which might be compared with that of the classics when well taught, and which would be far more rigorous than that of the classics when badly taught. Natural science can no longer claim to be the only subject that teaches observation, hypothetical reasoning, inductive working, and the manipulation of experimental problems; it can certainly claim to provide these advantages, but not to a greater extent than the humanities, and, it must be added, in a subject-matter which deals with a side of life far more remote from the daily experience of the ordinary citizen than are the conceptions of conduct and motive that the humanistic teaching can supply.

It is not denied that some moral ideas can be introduced through the medium of natural science. The conceptions of exactitude and truth can be given by

mathematics and science, and these subjects, quite apart from all questions of practical utility, could never be omitted from the curriculum, because they illustrate a particular kind of exactitude and a particular aspect of truth. It is because they involve the elements of truth and exactitude that the humanistic subjects can be made as profitable as the scientific ones, and it is because their subject-matter is of greater importance to the life of conduct and of action that greater prominence must be given to them. For the subjects through which moral ideas can be introduced are primarily the humanistic: history, literature, and geography. It is in connexion with these that ideals of conduct and suggestive human situations are to be found, and if suggestion is to be indirect, the first necessity in such humanistic subjects is that they shall possess a strong technique of their own, that they shall lend themselves to problem work, that in the process of instruction the pupil shall have his work to do as well as the teacher, and that the pupil's part shall, if anything, be harder and involve more reasoning than the teacher's. All these elements are necessary, and all these history, at any rate, supplies, if taught in the right way.

If, however, it is used, as the followers of Herbart would use it, solely for the sake of giving examples of conduct, it may fail lamentably in this direction. The too constant pressing upon a boy of examples of conduct, or the sententious handling of episodes, is certain to arouse suspicion in his mind. In fact, the whole doctrine of influence by suggestion is wholly at variance with the principles that underlie what the school of Herbart calls character-forming instruction (*Gesinnungs-Unterricht*). "Character-forming instruction is that

instruction which has as its aim the production of character in the young ; the awaking, grounding, training of the religious and moral will, at least in its beginnings ; the inducement to recognise and imitate examples of religion and morality, and the furthering of the first developments of faith and morality. These aims are the essential, necessary signs of character-forming instruction. They are to be found above all in religious and historical instruction. Both of these are, above all, character-forming subjects. No other subject has like them the professed aim of promoting a religious and good character.”¹

The aim “to recognise and imitate examples of religion and morality” is not peculiar to the Herbartians, and is not objected to by other schools of educational thought. Neither can exception be taken to the statement that historical instruction is the medium through which examples of morality and ideas that deal with conduct and with society can most readily be presented to the young. It is the method that seems inadequate, and indeed mischievous. “Character-forming instruction arises out of deep-seated, immediate experiences of feeling.”² It is true that the feeling must not be too strong. The emotional dissociation that has been objected to in direct suggestion is deprecated. “Character-forming instruction rejects all religious and ethical instruction through the emotions. It sees in violent shocks to the feelings, in agitation, in excess of feeling, nothing but hindrances to a firm and sincere religious and ethical direction of the will.”³ The “immediate experience of feeling” is thus to be a mild

¹ Rein's *Encyclopaedisches Handbuch der Paedagogik*, Art. “Gesinnungs-Unterricht.”

² *Ibid.*

³ *Ibid.*

one; and we may ask the question whether this mild feeling will be sufficient to counteract the very considerable feeling of contrariance that the average boy experiences when assaults are made upon his moral standards. There may perhaps be something peculiar in the method by which this gentle feeling that will repel contrariance is brought about, and we might reasonably expect, in conformity with the Herbartian intellectualistic position, according to which feeling arises out of the interplay of ideas, that stress might be laid on intellectual effort in this connexion. Unfortunately the modern Herbartian has not got the educational insight of his master, and hampers himself with an obsolete psychology. To our surprise we find that "The method of character-forming instruction is wholly different from the method of the natural sciences, as different as the ethical from the theoretical mode of treatment, as different as knowledge is from faith, as ethical insight is from the concepts of the understanding. It is therefore an error to place character-forming instruction under the yoke of the inductive method."¹

To the question what the exact method is to be, if it is not to be inductive (and presumably a deductive method is equally excluded), the answer is given by a recent writer, Dr. F. H. Hayward. It apparently consists in simply placing before the young examples of conduct, and it seems to be taken for granted that the gentle "experience of feeling" will result. "How immensely important, then, is the work of presenting to mankind—and especially to the scholars of our schools—the inspiring biographies which history has to offer.

¹ Rein's *Encyclopaedisches Handbuch der Paedagogik*, Art. "Gesinnungs-Unterricht."

Such biographies, presented in an historical setting and preceded by fairy tales, constitute the 'Gesinnungs-Stoff' of the Zillerians, the materials for 'Gesinnungs-Unterricht'—character-forming instruction. In such material must be included, of course, the priceless biographies with which the Bible can suitably provide the school; unless such material, biblical, national, and cosmopolitan, is presented in rich abundance to the youth of England, we must expect well-nigh with astronomical certainty that the youth of England will grow up barbarous, uncultured, and immoral."¹ That concrete examples of conduct should be "presented" to the young, few will be found to deny; but neither will any candid teacher of experience deny that in the great majority of cases the presentation is without any effect on character.

The method of presentation is the important matter, and for the Herbartian this is briefly to see that the receiving mind has in it the ideas necessary for an understanding of what is to come, and then to display the new conception to its admiring gaze. "Education . . . can give moral instruction, arraying in its service historical and biblical examples, and pointing to their moral import; this at present it does imperfectly."² The method, apparently, is to bring together examples of moral conduct, and to "point out" their import. It is easy enough to do this; to give moral instruction on these terms is child's play; but if there is any validity in the doctrine of reaction and contrariance, such instruction may be as futile as it is easy. Dr. Hayward is probably correct when he says: "It is doubtful whether *any* idea or maxim or exhortation, however abstract, is

¹ F. H. Hayward, *The Secret of Herbart*, p. 50.

² *Ibid.* p. 62.

entirely ineffective in building up the structure of morality"; but only on the condition that the term "morality" is interpreted as meaning the attitude towards conduct as conditioned by the whole after effects of such exhortations, including all the reactions set up by the moral truths to which the finger of Education "points," reactions which may well hurry off the learner in a direction widely different from that intended by the Herbartian. It is scarcely an exaggeration to say that the missionary cause could have found no surer method of alienating schoolboy sympathy than the countless sermons and addresses in school chapels that it has organised. Even if the Herbartian premisses were granted, and if this presentation of instances produced a gentle feeling of sympathy (and it is not for a moment admitted that feelings spring from intellectual ideas, though they may, of course, accompany them), a gentle feeling is not enough to stem contrarience; for this the deeper emotions that stir human nature to its depths are necessary, but their production is not always desirable, and indeed with most teachers is not possible.

As concrete examples two extracts may be given from F. J. Gould's *The Children's Book of Moral Lessons*, those illustrating Temperance and Courage:—"In ancient times there dwelt in Greece a famous people called the Spartans. They were a very temperate nation, though, like John Howard, they were more strict than most people need to be. The boys were taught to labour, to drill, to fight, and to endure hardships; and they slept on beds made of reeds which they had cut with knives on the banks of the river; but in winter they were allowed to strew thistledown on the beds, to make them softer and warmer. The houses of the Spartans were

built of plain logs of wood, hewn only by the axe ; and the doors were simply cut by the saw, and had no ornament ; the beds, tables, and other furniture were of the simplest character. The money they used was but iron coins. Lest they should become idle by resting on couches at home, or feasting too richly, it was ordered that all men should eat their meals . . . at the public tables, about fifteen persons sitting at each board. In these ways, and by sports and long exercises, the Spartans were prepared for war, and they advanced to battle without flinching, and would die rather than yield to a foe. . . . Thus you see the temperate Spartans were very BRAVE. And you boys and girls also wish to be brave, though not with that bravery which aims only at shedding blood. They are brave men who face the fire of burning houses, who toil on the sea, who labour in mines and quarries and docks—ah, yes, all men and women can be brave in bearing pain, in doing the daily work, in saying right words, in resisting what is unjust. And to be brave we need the noble temper : we must be TEMPERATE.”¹

Or again on Courage. “ Let us look closely at the word ‘courage.’ Some of you perhaps learn French. If I take away the syllable *age*, what will remain? The syllable *cour*. Suppose, now, I write on the blackboard this syllable, with the addition of the letter *e*. Here we have the word *cœur*, and *cœur* means *heart*. You remember the famous English king who wielded the heavy battle-axe against the Saracens in the Holy Land. His very name made the people fear ; and when a Saracen’s horse started nervously, his rider would say : ‘ What, dost thou think thou seest King Richard behind

¹ *Op. cit.* p. 55.

that bush?' This brave Richard was known as Cœur de Lion, or Lion Heart, for he had the heart or courage of a lion. You know the African mothers have a curious idea about the wonderful power of the lion's heart; and when the father has slain a lion in the chase he brings the heart of the fierce beast to the mother, and she cooks it and gives some to her boys to eat. As they eat she thinks the courage of the king of the desert enters into the breast of her sons." Various stories follow giving examples of different kinds of courage.

To the subject-matter of this teaching no exception need be taken. It is good to give boys examples of conduct, it is good to teach them the meanings of words denoting modes of action, it is right to make them discriminate between cognate virtues; but it is necessary to realise that these are ideas about morality and not moral ideas, not the ideas that will of necessity themselves take concrete form as moral actions. Mr. Gould in his preface states that the book is intended for children aged from ten to fourteen years, and hints that for older children different language, but not a different method, is needed. Yet for many boys who fall far short of fourteen years the very title, *Book of Moral Lessons*, would be sufficient to bring up the resolve that under no circumstances would any of the moral apophthegms therein contained be permitted to touch the springs of action. The anecdotes, however, apart from the moral exhortation that accompanies them, are attractive, and with very young children might find favour.

For the treatment of similar topics in a purely didactic and abstract manner there is, *pace* Dr. Hayward, nothing to be said. Witness the teaching of temperate habits

in a French manual of moral instruction :—" I told you yesterday what hygiene recommends. To-day I want to tell you what it forbids. Hygiene forbids several things: the abuse of drink, the abuse of tobacco, excesses at table and elsewhere. Wine, and even spirits, taken in moderate doses are a useful stimulant for men who work hard. As soon as they are abused they injure the mind. Further, as bad habits grow quickly, it does not take long to produce a drunkard, that is to say, a wretch who is no longer his own master, enfeebled in body and mind, liable to attacks of madness, dangerous to himself and to others, and often destined to end by succumbing to a terrible malady, delirium tremens. Those who have it suffer from delirium, during which dreadful visions pass before their eyes, their whole body trembles and degenerates; finally, when they are saturated with alcohol, it sometimes happens that they catch fire, when smoking a pipe, for instance. Then the whole body burns in a few hours, and the suffering is great. This is called spontaneous combustion. All excess is unworthy of a man. Man as a reasonable being must hold himself above it; and reason is the faculty of controlling and moderating one's conduct." ¹

The writer does not believe that this exposition of drunkenness would have awakened in him as a boy the zeal of the temperance reformer; in fact, he has a distinct recollection that the phenomenon of spontaneous combustion, as depicted in one of Captain Marryat's novels, inspired him with no disgust, but struck him rather as being an attractive incident. If there is any real tendency to drink, or if the boy's

¹ A. Burdeau, *Devoir et Patrie*, 1891, p. 66.

surroundings are likely to lead him astray, it is not likely that this treatment of the drink question will act as a deterrent; and the pictorial illustration which accompanies it, and which is here reproduced, does not help matters. Systematic lessons in hygiene or in elementary physiology may or may not be desirable; but it can be productive of no good to place before boys moral



FIG. 3.

After A. Burdeau (*Devoir et Patrie*, Schleicher Frères, Paris).

"Dès qu'on abuse des boissons alcooliques, elles troublent la raison."

apophthegms thinly disguised by an anecdotal or hygienic dress. If the lessons in hygiene are made hard or systematic enough, if the physiology is taught on sound and investigational lines, suggestions as to conduct may be made in this connexion; but the one thing necessary is that there shall be a rigorous method, and that the boys' attention shall be diverted from the moral undercurrent.

For suggestion, let it once more be repeated, it is not sufficient to have a sympathetic manner, an enthusiasm for the subject taught, and a happy knack of hitting upon the aspects of it that are likely to interest boys. The teacher who has these qualities is thrice fortunate. He possesses naturally what cannot be bought for gold or acquired by taking thought. But if in the confidence arising from his own gifts he pays no attention to the systematic handling of his subject, and hopes to be suggestive by habitual geniality or occasional fervour, he may easily miss the mark altogether. If the subject be history, it must, first and foremost, be taught in accordance with its own scientific technique. The pupil must be made to trace the connexion between cause and effect ; to interpret, abstract, and compare extracts from contemporary authorities ; to contrast character with character, and to make up his mind to what extent circumstances produced one character, while another practically decided the sequence of events and is the key to the whole political situation ; to draw inferences from data and to estimate the value of evidence ; and to realise that there are certain simple criteria by means of which the accuracy of a statement in history may be tested. He must be so much occupied with these matters that the moral and social teaching discreetly given by a reticent master will produce no contrariance. He must be lectured to very little, but questioned a great deal ; he must never be allowed to take the short cut to a premature conclusion, when the longer way with its obstacles and pitfalls of conflicting opinion is possible. He must be enticed, urged, or even driven, if need be, to wring out of a document every atom of pertinent information that it may contain. The subject

must be mapped out for him in problem form suited to his years, and through this systematic series of exercises he must cut his path, ever feeling from day to day that his control over his subject-matter and over the instruments that are placed in his hands is increasing.

Against such a background of strenuous and thought-compelling routine suggestions may be given, and given with success; and in connexion with a well-organised subject that commands the boy's respect owing to its difficulty they are likely to be far more effective than are those given when the subject is a soft option. It is their strong and definite technique that gives the Latin and Greek classics, when properly taught, their pre-eminent value as suggestive subjects, and renders peculiarly effective the history taught through their medium. It is because their strength in this respect is not realised that the movement to oust them from our schools has gained support. The boy has plenty of work to do: he has to know his paradigms, his lists of words; he has to apply his syntactical rules, and to see that his translation passes muster in class. All this leaves no room for suspicion that an attack can be made on his code of morals, his sentiments, or his ideals. Yet how fruitful classical teaching can be in this direction only the experienced classical teacher can know. The secret is that the contrariant ideas are quite dormant—even sententious disquisitions are hailed as a godsend by a boy whose one dread is that his turn may come and his ignorance be exposed.

“There is hardly any prose in Latin fit for boys to read,” says Mr. Benson. “Cicero is diffuse, and often affords little more than small-talk on abstract topics; Tacitus a brilliant but affected prosateur; Cæsar a dull

and uninspiring author."¹ The last statement, at any rate, may be contradicted with safety. Given the proper conditions and methods, Cæsar can be made as interesting and as inspiring as any other author that is likely to be prescribed for class-room work. (For it is useless to disguise the fact that the boy, if left to make his own choice unrestrained, would probably prefer Henty.) Let all the school editions of special books of the *Gallic War* be burned by the common hangman, they exist only to swell publishers' profits and advertise their editors. Let the boys have in their hands the complete unannotated text of the *Gallic War*, and let them at some time read the translation of Plutarch's *Life of Cæsar*; let the class-room be provided with an efficient wall map of modern Europe, and let there be also a few sections of the Ordnance Survey map to illustrate strategic points, such as Cæsar's march through the Burgundian gate to repulse Ariovistus, so that the campaign may not take place in a No Man's Land. Further, let the teacher be provided with a first-rate book of reference, such as Holmes's *Cæsar's Conquest of Gaul*, with a proper knowledge of his business as a teacher, and with an adequate stock of common-sense, and let the work be read as a whole, not inaccurately, but with a right selection of the important episodes, and an understanding of the parts omitted, so that the campaign and its importance may be realised.

Under these conditions there is no difficulty in interesting the class, in giving them abundance of hard and problematic work of every kind, and of making moral suggestions upon this basis of effort.

¹ *Op. cit.* p. 163.

If Temperance be in question the teacher has the following opportunities:—Book ii. ch. 15: “The Nervii touched their borders; on inquiring about their character and customs, Cæsar ascertained the following facts: that merchants had no access to them; they suffered nothing in the way of wine or of other things tending to luxury to be imported, because they considered that by these means their spirits were unmanned and courage relaxed; they were savages and very brave; they railed at and upbraided the rest of the Belgæ for having surrendered themselves to the Roman people and cast aside their hereditary valour; they positively declared they would neither send ambassadors nor accept terms of peace.” Book iv. chs. 1-2: “The Suebi do not live much on corn, but for the most part on milk and cattle, and are much engaged in hunting; this fact, owing to their kind of food and their daily exercise and the freedom of their life . . . not only fosters their strength, but also makes them men of huge bodily stature. . . . They do not allow wine to be imported to themselves at all, because they think that thereby the minds of men are softened and effeminated for enduring labour.” Book vi. ch. 21: “The whole life of the Germans consists in hunting and in the pursuits of war; from their childhood they devote themselves to toil and hardihood. Those who are slowest to outgrow their boyhood receive the greatest praise among their friends; they think that this fosters growth and fosters strength and sinews. To indulge in sensuous pleasure below twenty years of age they regard as the deepest disgrace.” Ch. 24: “There was a time in former days when the Gauls surpassed the Germans in valour, invaded them unprovoked, and, owing to pressure of population and want of land, sent

colonies across the Rhine. . . . Now also the Germans continue in the same state of need and endurance, living and dressing as of old ; whereas the Gauls, owing to the neighbourhood of the Province and their knowledge of transmarine products, have ample additions to their wealth and conveniences ; having been gradually accustomed to be overcome, and having been vanquished in many battles, they do not even put themselves on a level with them in valour."

He would be a stupid teacher who could not make suggestions of a valuable character when reading these passages, who could not give his pupils others of a like kind in classical literature, and, what is more, suggest some exercise or problem to be worked out in connexion with them. If courage be the virtue to be illustrated, instances are to hand in numbers. There are, firstly, the cases of envoys sent at the risk of their lives, Book i. ch. 47 : "Cæsar considered that it would be very dangerous to send one of his own officers as ambassador, and expose him to savages. The best course seemed to be to send to him Gaius Valerius Procillus, a young man of great merit and of the highest culture, both on account of his fidelity and his knowledge of the Gallic language." The danger incurred by this envoy is given in his report after his rescue. Ch. 53 : "He said that they had drawn lots three times in his presence as to whether he should be burned to death on the spot or reserved for another occasion." Book iv. ch. 12 : The bravery of Piso, who rescued his brother in battle at the cost of his own life. Ch. 25 : The bravery of the standard-bearer of the tenth legion, who jumped overboard at the landing in Britain, and led on the hesitating soldiers. The

bravery of the two centurions mentioned in Book v. ch. 44, who "kept up an incessant dispute with one another as to precedence, and every year contended in rivalry for the first places," and who, under stress of this competition, performed remarkable feats of valour. All these instances can be compared, the attention of the class being largely given to the linguistic involved, and in addition the boys can be asked to analyse the motives for bravery in each case, to compare them and appraise them.

If truth be the virtue to be inculcated, there is abundance of opportunity for estimating Cæsar's veracity as a historian and accuracy as a geographer. The various episodes which he might naturally be suspected of wishing to conceal or to misrepresent may be taken, and it may be shown that on some occasions, at any rate, when he has an opportunity of glozing over a disgraceful defeat, he seems to go out of his way to give the exact details. Witness Book iv. ch. 12, where he has no hesitation in relating how the Germans with only 800 horsemen inflicted a crushing defeat on 5000 of the Roman cavalry. His accuracy as a geographer can easily be considered while reading his account of the Meuse and the Vosges in ch. 10 of the same book.

Cæsar's Gallic War has been taken as an illustration for the very reason that it is not the book which first enters into the mind of one who has had a classical education when he attempts to sum up either the interest or the moral training that he gleaned from the classics. If these elements are to be found in the author whom most of us look back to as supplying some of the dreariest experiences of our youth, how much more abundant are they in, say, Plato's *Phædo* or *Apology*.

It is difficult to think of any literature that gives similar opportunities for introducing a boy to serious thought on great subjects, and that enables this to be done incidentally, without an atmosphere of priggishness, and in company with the feeling-tone that results from strenuous effort and rigid intellectual discipline. Consider the chances offered to a live teacher by such plays as the *Alcestis* and the *Prometheus Vincetus*, by many episodes in Homer and in Virgil's *Aeneid*, by passages in Livy and in Tacitus, by portions even of Xenophon's *Anabasis*, a work which when taught by dull people has been responsible for an appalling number of dull school-hours; in every case the conditions are the same, the pupil has plenty of work to do, and is not on the look-out for assaults upon his moral code.

The classical languages, then, give exceptional opportunities for suggestion, because in addition to a human content they present at the same time linguistic matter to which a rigid method can be applied. The mode of treating them too often adopted, by which they are used as a formal training only while the subject-matter is virtually ignored, is, it need scarcely be added, in itself not suggestive, and has done more than anything else to discredit classical studies as a school subject.¹

In suggestion through the medium of English literature the same general position holds good. The harder the technique of the subject, and the more it is

¹ The same danger threatens the teaching of modern languages. It is impossible to read the *Modern Language Monthly*, an organ conducted by experts for experts, and not to be struck by the small amount of reference to the subject-matter that should be read in schools. Apparently there is a failure to realise that the labour spent in perfecting the technique of linguistic instruction is justified only if the ideas introduced through the medium of the language are worth introducing. If they are not, or if the attention paid to this element is not fully equal to that given to linguistic, the subject has comparatively little claim upon our already overcrowded time-table.

studied for itself, the more will the conditions for indirect moral suggestion be present. Take, for example, the following passage from Tennyson's *Ode on the Death of the Duke of Wellington* :—

Not once or twice in our rough island-story,
 The path of duty was the way to glory :
 He that walks it, only thirsting
 For the right, and learns to deaden
 Love of self, before his journey closes,
 He shall find the stubborn thistle bursting
 Into glossy purples, which outredden
 All voluptuous garden-roses.
 Not once or twice in our fair island-story,
 The path of duty was the way to glory :
 He, that ever following her commands,
 On with toil of heart and knees and hands,
 Thro' the long gorge to the far light has won
 His path upward, and prevail'd,
 Shall find the toppling crags of Duty scaled
 Are close upon the shining table-lands
 To which our God Himself is moon and sun.
 Such was he ; his work is done.
 But while the races of mankind endure,
 Let his great example stand
 Colossal, seen of every land,
 And keep the soldier firm, the statesman pure :
 Till in all lands and thro' all human story
 The path of duty be the way to glory :
 And let the land whose hearths he saved from shame
 For many and many an age proclaim
 At civic revel and pomp and game,
 And when the long-illumined cities flame
 Their ever-loyal iron leader's fame,
 With honour, honour, honour, honour to him,
 Eternal honour to his name.

In this passage the teaching is not concealed; it is definite and emphatic, and both the choice of words and the devices of metre combine to bring the lesson home. To expound the conception sententiously might easily be fatal, and in many a boy's mind would engender a dislike for the Duke of Wellington similar to that often felt for the excessive virtue of the Pius Æneas. The sermon has its place, but it is not in the class-room, or at any rate only on very rare occasions. The passage should, of course, be read with solemnity, and it should be read well. It is one of those passages that should never be entrusted to a bungler. The class should feel that the teacher appreciates it, and if they also feel that his appreciation makes him shrink from expounding it, so much the better. It is, however, necessary to dwell on the subject-matter, and this can be done from the analytical if not from the mandatory standpoint. If the class be asked as an exercise to analyse Tennyson's conception and treatment of Duty, and to compare it with the treatment of the same subject in Wordsworth's *Ode to Duty*, they will, from a purely intellectual standpoint, be busied with the subject-matter, and the moral teaching will be far more suggestive and far less likely to set up a tone of reaction than if thrust down the boys' throats by a fervid address.

To a younger class an easier exercise might be given. They might, for example, be asked to compare the virtues which were characteristic of the Duke of Wellington with those demanded from the knights of romance, and might be directed to re-read the *Morte d'Arthur* and *Sir Galahad*, if they were already acquainted with these poems, and to pick out the references to knightly duties that are to be found there.

The object is the same, to keep the subject-matter before them and to avoid sententiousness by judiciously directed activity. It is scarcely necessary to add that, although in the process of indirect suggestion the teacher should to some extent keep himself in the background, the stronger is his personality the more effective will the indirect suggestion be. The nearer he approaches to the dividing line that separates indirect from direct suggestion, the more does the need of personality make itself felt, while without considerable force of character it is almost useless to make suggestions of the more violent kind, to tear off the whole covering of reserve, to force boys, whether they wish it or not, to view in their nakedness questions of conduct and morality that are generally evaded by them, or shrouded as rapidly as possible in schoolboy sophism and excuse. Without personality the effort is useless or even harmful; with it almost anything may be done. A man who is obviously sincere in what he says, who evidently feels for his pupils a disinterested and in some cases a personal affection, in whom there is the element of sternness which commands respect, and who has in addition some instinct for a dramatic opportunity, may with effect speak to boys about matters otherwise better left untouched. It is, for example, not desirable to discuss with boys the importance and the nature of the suggestive influence that the school surroundings and society should have upon them. To do so under ordinary circumstances would be as unwise as to talk over the methods of teaching that you adopted and to dilate upon their excellence. And yet as they come from Arnold's mouth the words carry with them their own justification.

It seems to me that the advantage of great places of education are very considerable, and the benefits of such foundations as ours, of which the day has naturally reminded me, impose a great responsibility on all of us. I said the advantages of *great* places of education; and I meant to lay a stress upon the epithet. It seems to me that there is or ought to be something very ennobling in being connected with any establishment at once ancient and magnificent, where all about us and all the associations belonging to the objects around us should be great, splendid, and elevating. What an individual ought and often does derive from the feeling that he is born of an old and illustrious race, from being familiar from his childhood with the walls and with the trees that speak of the past no less than of the present, and make both full of images of greatness; this, in an inferior degree, belongs to any member of an ancient and celebrated place of education. In this respect every one has a responsibility imposed upon him which I wish that we more considered. We know how school traditions are handed down from one school generation to another, and what is it if in all these there shall be nothing great, nothing distinguished, nothing but a record, to say the best of it, of mere boyish amusements, when it is not a record of childish follies? Every generation in which a low and foolish spirit prevails does its best to pollute the local influences of the place—to degrade its associations, to deprive the thought of belonging to it of anything that may enkindle and ennoble the minds of those who come after it. And if these foolish or tame associations continue they make the evil worse. . . .

So the spirit gets lower and lower; and instead of finding a help and an encouragement in its place of education, the ingenuous mind feels them all no more than a weight upon its efforts; they only tend to thwart it and to keep it down. This is the tendency not only of a vicious tone prevailing in a great place of education, but even of a foolish and childish one; of a tone that tolerates ignorance and an indifference about all save the amusements of the day. On the other hand, whatever is done here well and honourably outlives its own

generation. In smaller schools one cannot look forward to posterity; when our children are of an age to commence their education, a total change may have taken place in the spot, and all its associations may have vanished for ever. But here it is not so; the size, the scale, the wealth of a great institution like this insure its permanency so far as anything on earth is permanent. The good and evil, the nobleness or the vileness, which may exist on this ground now, will live and breathe here in the days of our children; they will form the atmosphere in which they will live hereafter, either wholesome and invigorating or numbing and deadly. This roof under which we are now assembled will hold, it is probable, our children and our children's children; may they be enabled to think when they kneel, perhaps over the bones of some of us now here assembled, that they are praying where their fathers prayed; and let them not, if they mock in their day the means of grace here offered, encourage themselves with the thought that the place had long ago been profaned with equal guilt; that they are but infected with the spirit of our ungodliness.¹

Neither would the straight hitting of the following passage produce the desired effect with the boys who need it most, unless the hitting were very straight and the words delivered with the immense force of fearless simplicity:—

“Whoso shall offend one of these little ones which believe in Me, it were better for him that a millstone were hanged about his neck, and that he were drowned in the depth of the sea.”—MATT. xviii. 6.

Now, then, you see what the text means and you feel how it applies to you. You know that there are amongst you many boys who remember and wish to keep the lessons that they have received at home, and you know also how much it is the fashion of schools to teach just the contrary. And I will take the two instances which will have come, I fear, often within

¹ *Sermons by Thomas Arnold, D.D.*, Third Series, 1876, p. 144.

the experience of you all. I mean the case of idleness and the case of extravagance.

First for idleness. There are boys who have either never learnt or have quite forgotten all that may have been told them at home of the duty of attending to their school lessons. We know that there are boys who think all their lessons merely tedious, and who are resolved never to take any more trouble about them than what they cannot possibly avoid. But being thus idle themselves they cannot bear that others should be more attentive. We all know the terms of reproach and ridicule which are thrown out against a boy who works in earnest and upon principle. He is laughed at for taking unnecessary trouble, for being afraid of punishment, or for wishing to gain favour with the masters and be thought by them to be better than other boys. Either of these reproaches is one which a boy finds it very hard to bear; he does not like to be thought mean or as plodding or as wishing to court favour. He has not age or sense or firmness enough to know and to answer that the only fear of which he need be ashamed is the fear of his equals, the fear of those who are in no respect better than himself, and have therefore no sort of right to direct him. To be afraid, then, of other boys is in a boy the same sort of weakness as it is in a man to be afraid of other men; and as a man ought to be equally afraid of fearing men and of not fearing God, so a boy ought to be ashamed of fearing boys and of not fearing his parents and instructors. And as in after life the fear of God makes no man do anything mean or dishonourable, but the fear of man does lead to all sorts of wickedness and baseness; so amongst boys this fear of their parents and teachers will only make them manly and noble and high-spirited, but the fear of their companions leads them to everything low and childish and contemptible. Those boys, then, who try to make others idle, and laugh at them for trying to please their masters, are exactly like the men who laugh at their neighbours for being religious and for living in the fear of God; and both are like the more hardened ruffians in a gang of thieves or other

criminals whose amusement it is to laugh at the fear of justice which beginners in crime have not yet quite got over. In all these instances there is not only the guilt of our own sin, but the far worse sin of encouraging sin in others; and as I showed you last Sunday how your school faults, although very trifling in their worldly consequences, were yet as serious in the sight of God as the faults of grown-up men, because they showed that you were not serving or loving Him, but serving and loving evil; so it may be said, without the least going beyond the truth, that a boy who, being idle himself, tries to make others idle also, is exactly "offending one of these little ones who believe in Christ," and is in the daily habit of that sin which Christ says it were better for him to die directly than to be guilty of.¹

For utterances like these to have the full magnetic value that they must possess, unless they are to be regarded as the conventional discourse of the school pulpit, which is listened to with interest, perhaps, at the time of utterance, but leaves no later echo in the moral fibre, there should be behind them a single-minded self-sacrifice to the rising generation pervading all the routine of school duties, and making each individual who comes into contact with the speaker feel that his moral welfare is of interest to at least one other person besides himself. Then and not otherwise will the preacher's voice

Like a trumpet . . . rouse
 Those who with half-open eyes
 Tread the border-land dim
 'Twixt vice and virtue.²

¹ *Sermons by Rev. T. Arnold, D.D.*, Second Series, 1874, p. 53.

² Matthew Arnold, *Rugby Chapel*.

CHAPTER X

THE SANCTION OF SUGGESTION

IN hypnotic suggestion the personality of the subject is entirely obscured ; he becomes a mere puppet dependent on the person who pulls the strings. With direct suggestion in the waking state, though the personality is not obscured, the subject tends to become a reflection of some one else ; his sentiments are echoes, and the development of his original self is so far hindered. Even with indirect suggestion and the auto-suggestion that arises out of it, although the suggestion develops along the lines prompted by natural characteristics, and although the development of these in many cases may be fostered rather than repressed, the thoughts and feelings of the subject become different from what they would have been without the conscious effort on the part of others to lead them in a certain direction. Although the character may have developed, the mode of development has none the less been affected, and we have to ask by what right one person may take it upon himself to implant in another ideas and sentiments which will ultimately lead to action, which cannot fail to determine personality, and for which the subject himself in the beginning expressed no desire. The rights even of a father over his children are now restricted. He no longer, as in

primitive times, is allowed to deprive them of life. Are we going to refuse him this right and yet give him full control over the personality which may be more durable than life? Or are we prepared to go farther, and allow him to delegate the right to any casual person? What are the rights of the child in the matter? It is on account of the widespread and often justifiable scepticism about education, to which reference has already been made, that these questions do not receive their proper share of attention. Once it is established that ideas properly suggested in connexion with the right habits of mind have indeed the powers ascribed to them, this scepticism must disappear. As long as education is ineffective, as long as it is a mere fashion, gratifying to the instinct that prompts us to make others like ourselves, but really unable to do more than impose a thin veneer of knowledge and of social convention, it is of comparative indifference what views on social matters are inculcated during the period of school life. In proportion as education becomes a real factor in determining the conduct and beliefs of the younger generation, the question as to sanction becomes increasingly insistent and refuses to be placed on one side.

It is, in the first place, impossible to withdraw a child from all suggestive influences, unless he is brought up in air-tight isolation. He will receive suggestions from servants, from companions, from shop-windows, from the life that he sees in the streets. The efforts that are sometimes made to bring up a child with an impartial mind on matters of religion, morality, or politics, in order that he may be free to take his own line when he is of a fit age to judge, are bound to end in failure. From birth he is exposed to contagion on every side,

and long before he reaches maturity will be tinged with prejudices which render true impartiality of judgment difficult if not impossible. Impartiality is a state of mind that arises out of mature knowledge, and after a long process of examination and rejection of prejudices or preconceived opinions. With immaturity and ignorance it cannot exist. The child, therefore, while he has a right to his characteristics, has no claim to be left wholly unaffected by suggestions consciously made, for this claim is meaningless. A sick man is not turned into a chemist's shop and asked to make his own choice of drugs, and similarly a child must not be exposed to the countless suggestions that press in upon him without some effort to select and sift them, or to provide him with a guiding idea that may help to protect him from the more harmful of them.

All suggestions do not present equal difficulty. Arranged in order of legitimacy they are: (1) Suggestions in connexion with accepted elements of moral conduct or the habits which promote such conduct; (2) Æsthetic suggestions; (3) Social and political suggestions; (4) Religious suggestions.

1. The first kind are not likely to be called in question either by the future adult or by the parent. No one can regret that as a child suggestions were made to him of temperance, of self-control, of self-sacrifice, of courage, of kindness. To make such suggestions is the first duty of the teacher. Indeed, it is upon the inculcation of truth, the basis of all morality, that a great part of school training is concentrated. The training in accuracy, in habits of neatness, and in logical reasoning, which is given by the formal element in rigid school studies such as classics, mathematics, and science, while not in

itself a suggestion of truth, produces the right temper of mind to receive it. With this training as a basis, suggestions of the beauty of scholarship, of the moral value of taking into consideration all the facts before attempting to form a conclusion, of the deplorable moral results of slipshod work, slipshod reasoning, and half-conscious concealment of data, may effectively be given. If suggestions of this kind raise any problem, it is that of the teacher's responsibility rather than of his right to suggest.

2. Neither do æsthetic suggestions present much difficulty. It is true that standards of taste in literature and in art differ widely, and that therefore for those who believe in a close connexion between æsthetic and moral insight the selection of the proper standards will be of great importance ; but the adult who looks back on his school-days is likely to be grateful if any suggestion has been made that has opened up for him a field of æsthetic enjoyment, even though he recognises that with juster appreciation or greater knowledge on the part of the teacher his æsthetic insight and interest might have been deeper or of more rapid development.

3. With social and political matters the case is different, and the remodelling of the school curriculum adds to the difficulty. As long as the basis of school studies was the classics taught from the standpoint of grammar and syntax, and supplemented by a mainly formal study, such as mathematics, it was not necessary to consider the effect of school training on social views and political standpoints. It is now recognised that in school studies the humanities are paramount, that necessary though a knowledge of science may be as giving an interest in a powerful factor of social development, and training the mind to accurate thought in a well-defined

class of subject-matter, it must be preceded by an insight into human aspirations and character. For the first time in the course of education since the Renaissance a fair amount of attention is given to modern history, literature, and geography, and the suggestion is made that they shall be properly taught. But let there be no hesitation in facing the situation. Either these subjects will remain sham subjects, always prone to degenerate into conventional knowledge, in which case it is sheer waste to spend either public or private money upon them ; or they will be taught as serious branches of human life and expression, and in this case it is almost impossible to avoid innumerable questions of the gravest kind which few adults can discuss without some difference of opinion. In the history lesson it is impossible to avoid a treatment of the religious questions under the Tudors and of the political questions under the Stuarts. Bain realised this, and though he is astute enough to see the difficulty, his lack of insight into educational practice led him to conclude that in the interests of peace history must be excluded from the class-room.¹ In the literature lesson, if properly conceived as an introduction to the serious study of human sentiment and ideals, debatable questions of some kind are seldom absent ; in the geography lesson such topics as empire, the rights and the treatment of inferior races, the duties and the dangers of colonisation,

¹ A. Bain, *Education as a Science*, 8th ed., 1892, p. 287. "A very searching inquiry into modern events brings out such a variety of opinions on practical politics, and still more in religion, as to make an obstacle to the introduction of the subject into the higher schools and colleges. This difficulty is felt in Germany, where professors are more outspoken than in England ; it also occurs in connexion with the Irish Roman Catholics in the Queen's Colleges. A history of the Reformation could hardly be thorough if it offended neither Protestants nor Roman Catholics ; a history of the first centuries of the Christian era, if it dissatisfied nobody, would be worthless to everybody."

can be avoided only at the risk of sterilising the subject.

The solution which most readily rises to the mind is that of an impartial treatment. In the handling of all controversial questions the teacher might refrain from taking one side or the other, might content himself with indicating in a clear-cut fashion the oppositions of view and of standpoint involved, leaving the pupil free to bestow his sympathies as he wishes, and guided by them to draw his own conclusions as to motive and character. As a result of this, it might be hoped that the pupil would acquire the habit of impartial and detached judgment. Stated in general terms, this solution is a specious one; when examined in detail it is seen to make an impossible demand. There are subjects about which it is impossible for a serious man to be impartial. Every one who has studied history with any attention has his views upon the various religious controversies, upon the rights of the people and of the crown, and on the claims and dangers of democratic development; and in expounding his subject, such a man cannot fail to indicate what these views are. In fact, his very efforts to be impartial may give to his own views, when they happen to filter through, even greater suggestive force. If he were to display a violent partisanship, it is not at all improbable that a reaction would be set up, and that his pupils would deliberately range themselves on the other side; while the evident anxiety not to obtrude a genuine enthusiasm will disarm opposition. Doubtless there are men who take no interest in religious, political, and social questions, but these are not the men who should be selected to give instruction in humanistic subjects. If such men attempt to give a carefully-balanced statement of the

merits and demerits of any position or of any personality, they are, as result, far more likely to produce in their pupils a spirit of scepticism than one of impartiality, a dreary attitude of indifferentism rather than a burning enthusiasm for the subject combined with a resolution in the interests of fairness to check the tendency to favour one side rather than the other. Interest and enthusiasm should be the outcome of all lessons in the humanities ; a sense of impartiality is desirable in conjunction with these, but is no substitute for them.

It seems, therefore, as if in dealing with the humanistic subjects the teacher must either suggest his own opinions or be wholly ineffective. There are, however, two palliatives of this position :—(a) He may confess that he has certain views, and while he makes no concealment of them may keep them in the background and state the opposite views with force. In this case, by not exciting curiosity as to his opinions, he will diminish the suggestive force of his own ideas, while yet allowing the class to see that to him the subject is a serious one.

(b) In a large school it is improbable that all teachers will hold the same opinions, and thus the pupils in passing from one class to another will hear conflicting views. These to some extent will neutralise one another, and the view that ultimately becomes suggestive may be that which is in sympathy with the boys' natural inclinations or home up-bringing.

But when all is said, if the curriculum is good it will contain debatable matter, and if the teacher is good he will be suggestive in one direction or another, and we have once more to ask by what right he suggests his own convictions in matters where varied opinions are possible.

Two situations are conceivable. (1) He may be teaching in a school of private or semi-private character. In this case it may be assumed that he has been selected by a school in which views of a certain kind are held on the more important features of religion and politics, and thus that his line of thought has been settled for him and acquiesced in by him. If the parent chooses his own school, and has a sufficient choice of schools, the problem is largely solved ; although even here the State may have a right to intervene and to demand that its future citizens shall not be brought up in too narrow a spirit.

(2) When the teacher is paid either wholly or in part by the State, and when his pupils are drawn from families representing every variety of opinion, the position is not so simple. If many parents are of a democratic way of thinking, is he justified in suggesting to his class that the execution of Charles I. was a crime? When the pupils are drawn from families whose views are conservative, is he to be debarred from pressing upon them the virtues of the Commonwealth?

The desire to secure freedom of view for the teacher has led to a demand that definitely religious instruction shall be excluded from the curriculum of State-aided schools ; but if this method were extended to all the subjects in which variety of opinion is possible, little that is worth teaching would be left, and therefore this solution cannot be entertained. Neither can it be admitted that the State as paymaster has the right to draw up a syllabus of the views that may be suggested and of those that may not. Such a syllabus would represent the views of the dominant party for the time being, but might be wholly opposed to those of a large minority. In German secondary schools teachers of

history are instructed to use the history lesson as an instrument for inculcating respect for the Hohenzollerns and distrust of social-democratic principles; and similarly an ultra-democratic party when in power might demand the teaching of social-democratic views, and the stern repression of any tendency towards conservative or monarchical sentiment on the part of the younger generation. If under such a regimen the subjects that we have in mind were taught at all, the new tyranny would effectively repress in the teacher all enthusiasm and all human feeling; he would become a dull mechanism, competent to place before his pupils formal antitheses, but unable to excite in them real enthusiasm or to communicate to them real insight. With such conditions, suggestion would be impossible and education a mockery. For a teacher to be effective he must be untrammelled by any direct external coercion, he must be free to take the line in which his instincts lead him, and when deep-seated feeling compels him to adopt a certain position he must be under no constraint to conceal his views. Whence is the sanction of this freedom to be derived?

From two sources: the principle of averages and the professional position and spirit of the teacher. It is unlikely that in the long run views of a one-sided nature will be predominant among teachers taken as a class. Teachers are drawn from the whole society, and the relative proportions of opinions in the community will be faithfully represented in the limited section to whom education is confided. In any one school, as we have seen, it is probable that a variety of opinions will be represented by the staff, and it is as necessary that a pupil should be brought into contact with conflicting

views as that, through the subjects taught in a varied curriculum, he should become acquainted with the particular mode of reasoning embodied in the technique of each separate branch of study.

But it is from the professional spirit of the teacher that the main sanction must be derived. To the teacher as a professional man the community confides the upbringing of its children; the more effective his intellectual and professional training has been, and the more he realises his responsibility, the greater the extent to which he can be trusted. He must be free from external coercion, from internal constraint he can never be relieved. His whole teaching life must be permeated by a sense of the grave duties of his position and of the trust reposed in him. This spirit, if it be present, will lead to a severe pruning of crude views and unruly enthusiasms. Under its guidance he will give his pupils the most moderate expression of the opinions which he finds himself driven to uphold, and he will refrain from communicating to them those which arise from passing moods or temporary irritation. He will be an example to them of reticence and of balanced judgment, and will give them only of his best, the fruits of all the self-criticism of which he is capable. More than all other professional men he must be mindful of his responsibility. If suggestion is indeed a force in education, if the passing remark of a gifted teacher may set in motion a train of ideas that ever grows from within until ultimately it forms a dominating system and a constant guide of conduct, the schoolmaster's craft demands from those who enter upon it continual watchfulness and continual self-control, and needs as inspiration a single-hearted devotion to the welfare of the young.

APPENDIX

THE RELATION BETWEEN MENTAL DISSOCIATION AND THE SYMPTOMS OF HYPNOSIS AND SUGGESTIBILITY

Mlle. R. L., twenty-eight years of age, had been a somnambulist from infancy. Her childhood was spent in the country with her parents; later she was governess and companion in rich families. In a state of somnambulism she jumped into a pond and afterwards had a severe fever. Later on her attacks of somnambulism increased. "She dreams of her mother. Wishes to go into the country; packs in great haste, 'for the carriage is waiting,' runs to say good-bye to the people in the house, not without shedding a good many tears. She rapidly descends the staircase, does not stop till she reaches the street door, the key of which she has taken the precaution to hide, and sinks down in distress near it. For a long time she resists any one who persuades her to rise and go back to bed, complaining bitterly of the tyranny of which she is a victim. She ends, but not always, by returning to bed, usually without entirely undressing, and it is this which tells her on awakening that she has not slept quietly; for she has no memory of anything that has happened during the attack."

Some of her attacks are of a different nature. "It is eight o'clock in the evening: several women are working round a table on which is placed a lamp. Mlle. R. L. directs the work, and herself takes an active part, chatting gaily. Suddenly a noise is heard as her forehead falls sharply on the edge of the table: her shoulders are bowed. This is the beginning of the attack. She straightens herself after a few seconds, tears off

her eyeglasses spitefully, and continues the work which she had commenced. She no longer needs the glasses which considerable short-sightedness render necessary in her normal state, even though she places herself so that her work is less exposed to the lamplight. If she needs to thread her needle she throws both hands under the table, feeling in the dark, and in less than a second succeeds in putting the silk through the eye—a thing which she does with difficulty in the normal state, even when she is aided by eyeglasses and a bright light.”¹

More remarkable still is the case of Miss Beauchamp, observed and admirably described by Dr. Morton Prince of Boston.² Miss Beauchamp while attending to her duties as a hospital nurse suffered a mental shock. “She returned to her duties much agitated. For several days she was in an excited state. She walked the wards by night, and in the daytime, when off duty and supposed to be asleep, slipped out of the hospital and wandered about on the fields. Then she began . . . gradually to change in character.” It was in this condition that she first came under Dr. Prince’s care. As the conventional modes of treatment did not benefit her, it was decided to try hypnotic suggestion. She fell readily into a state of deep hypnosis and various suggestions were made to her which considerably benefited her mental health. This treatment was continued. Her personality under hypnosis was not noticeably different from that of the waking state except that she was more submissive and amenable to suggestion. On several occasions, however, Dr. Prince was surprised to find that her character in hypnosis was completely altered, that she denied facts which she had previously admitted, and talked of Miss Beauchamp as She, whereas when hypnotised she had always alluded to herself in the first person. This proved to be the birth of a fresh personality, which later on chose for itself the name of Sally. At a later date a third personality developed unlike either of the others, and the final state of disaggregation which this unfortunate

¹ A. Binet, *Alterations of Personality*, 1896, p. 22.

² Morton Prince, M.D., *The Dissociation of a Personality*, 1906, p. 215.

lady's mental system displayed may be schematised as follows :—

B. I.—The personality which came to Dr. Prince for treatment, and which he imagined to be the real Miss Beauchamp. Her characteristics were saintliness, meekness, reserve, great depression about herself, and aboulia or inability to do or to say what she wanted. She could read and understand French.

B. II.—B. I. hypnotised. In many respects she was like B. I., but in some ways more normal.

B. III.—A totally different personality. Mischievous and apparently quite devoid of any moral sense. When she got the upper hand, her great delight was to play pranks and do things calculated to irritate B. I. She was wholly ignorant of French, and presented some curious symptoms of anæsthesia.

B. IV.—A different personality again, more like B. I. than B. III., but with totally different likes and dislikes. She was more normal than Miss Beauchamp, did not suffer from aboulia, had more self-control and more courage, but was quick-tempered when restrained or placed in circumstances which she did not enjoy.

B. V.—This was B. III. hypnotised.

B. VI.—This was B. IV. hypnotised.

These personalities alternated with alarming rapidity. On the occasion of a visit to Dr. Prince, who had been perplexed by the inconsequence of his visitor, it was elicited "that it was B. I. who started to make the call, and on the way had changed several times back and forth with Sally and B. IV. B. IV. walked on in a mechanical way without any particular knowledge of what she was going to do. It was B. I. who had rung the door bell, changing on entering the house to B. IV., then back again to B. I. on the staircase, finally entering the room as B. IV." ¹

The knowledge that each had of the others differed greatly. Both B. I. and B. II. were for a long time in ignorance of the

¹ *Op. cit.* p. 181.

existence of B. III., and never knew anything about her except what they were told.

B. I. knew nothing about B. II., but her memory was good for the whole of her previous life.

B. III. knew everything about herself (*i.e.* her memory was continuous) as well as about B. I. and B. II. She knew B. I.'s inmost soul. She knew what B. IV. did, but was ignorant of her thoughts.

B. IV. when she first came into existence had no knowledge of anything. Later on she knew of her own experiences and developed a fragmentary knowledge of B. I.

The following episode illustrates well the relations between Sally and B. I. "On one occasion Sally smoked cigarettes, a thing that B. I. would never have done. Miss Beauchamp, when awakened, entirely ignorant of what she had been doing, complained of a bitter taste in her mouth, but could not identify it. At the next interview I remarked to Sally, 'Wasn't it fun to see Miss Beauchamp when she tasted the tobacco in her mouth and did not know what it was.' Sally laughed and thought it a great joke. 'Yes, she thought you had been putting quinine in her mouth, but did not dare ask you.' This remark, later verified by Miss Beauchamp, was one of many which showed that Sally had knowledge of Miss Beauchamp's thoughts."¹

Miss Beauchamp was finally restored to health. The basis of the real Miss Beauchamp turned out to be B. II., or the hypnotic state of B. I. With this by suggestion were combined B. I. and B. IV., and the result was a stable personality whose memory covered all the other personalities except that of Sally. On the fusion of I., II., and IV., Sally disappeared.

This case brings out very forcibly the close relation between dissociation and suggestibility. As we have seen, suggestions of anæsthesia or negative suggestions are easy to produce in the hypnotic state. With Miss Beauchamp they could be produced in the waking state. "I say to Miss Beauchamp,

¹ *Op. cit* p. 55.

'Sensation will disappear from the forefinger of your right hand,' at the same time stroking the finger with light touches. The finger becomes profoundly anæsthetic, so that a pin may be thrust into the skin and the joints bent without anything being felt. All forms of sensation are included in the anæsthesia, which is profound for all objects and stimuli."

In the following experiment the anæsthesia is of a somewhat different character :—"I hold up a metal rod (an electrode for an electrical machine) before her eyes and say, 'Close your eyes for a moment. When you open them this electrode will have disappeared.' She closes her eyes, and on opening them cannot see the metal rod, though it is held directly before her. She sees my hand as if holding something, but she sees nothing else. I tell her to feel the rod. She puts her hand upon it and says that she can feel it; in fact, she fingers it and follows the outline of the metal rod and the ball at the top. She feels something that she cannot see. I now say, 'I shall pass the electrode from one hand to the other. When it is in the left hand you will see it, but when in the right it will disappear.' I pass the rod back and forth from one hand to the other, and the moment it is grasped by the left hand it becomes visible, but disappears as soon as seized by the right."

Here the normal state of disaggregation evidently brings with it as a concomitant extreme suggestibility,¹ and this is to be noticed also in the case of Mr. Hanna, observed by Messrs. Sidis and Goodhart.²

Mr. Hanna fell from his horse and injured his spine. The shock deprived him of his memory. He became as one newly born and was aware of experiences previous to the accident only as information derived from others. His personal identity thus went back no farther than the accident. He could not be hypnotised, so that this method of cure was not available. By degrees, however, his primary personality came back for

¹ The case of Lucie reported by M. Janet, *L'Automatisme Psychologique*, p. 87, illustrates the same curious relationship between the various personalities.

² Sidis and Goodhart, *Multiple Personality*, 1905.

short spells, these spells became longer, and finally the two personalities were fused together with one continuous memory.

His secondary state presents some remarkable features analogous to those which we have already observed in Miss Beauchamp. His emotions changed rapidly and were readily influenced by passing events; they were unstable and less persistent than in his other state. His sensitiveness in the secondary state was very acute, and he was extremely susceptible to external stimuli. This delicate sensitiveness manifested itself in a form which to his family appeared as clairvoyance. Thus he was able to find objects hidden from him, and was uniformly correct in guessing in which hand a small coin was held, both hands being concealed from view. His knowledge seemed to be a kind of intuition, or, as he said, instinct, which he could not explain or understand. This condition was absent both in the primary state and in the final condition of restored health. This clairvoyance greatly awed Mr. Hanna's family, who attempted to conceal it even from the doctors who attended the case.

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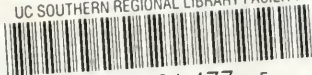
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